

ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT

I-15 MOJAVE WILDLIFE CROSSINGS

Resolution SHOPP-P-2425-03B

(to be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☒ State Highway Operation and Protection Program
- ☐ Trade Corridor Enhancement Program

2. PARTIES AND DATE

- 2.1 This Project Baseline Agreement (Agreement) effective on December 5, 2024 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, Caltrans, and the Implementing Agency, Brightline West, sometimes collectively referred to as the "Parties".

3. RECITAL

- 3.1 Whereas at its 3-22-2024 meeting the Commission approved the SHOPP and included in this program of projects the I-15 MOJAVE WILDLIFE CROSSINGS, the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as Exhibit A, the Project Report attached hereto as Exhibit B, the Performance Metrics Form, if applicable, attached hereto as Exhibit C, as the baseline for project monitoring by the Commission.
- 3.2 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

- 4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.
- 4.2 To adhere, as applicable, to the provisions of the Commission:
- ☐ Resolution , "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution , "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution , "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☒ Resolution G-24-34 , "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated 3/22/2024
- ☐ Resolution , "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated

- 4.3 All signatories agree to adhere to the Commission's Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.
- 4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.
- 4.5 Caltrans agrees to secure funds for any additional costs of the project.
- 4.6 Brightline West agrees to report to Caltrans on a quarterly basis; on the progress made toward the implementation of the project, including scope, cost, schedule, and anticipated benefits/performance metric outcomes.
- 4.7 Caltrans agrees to prepare program progress reports on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.
- 4.8 Caltrans agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.
- 4.9 Caltrans agrees to submit a timely Project Performance Analysis as specified in the Commission's SB 1 Accountability and Transparency Guidelines.
- 4.10 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits and performance metric outcomes during the course of the project, and retain those records for six years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.
- 4.11 The Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for six years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

- 5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.
- 5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.
- 5.3 Performance Metrics
See Performance Metrics Form, if applicable, attached as Exhibit C.
- 5.4 Additional Provisions and Conditions *(Please attach an additional page if additional space is needed.)*

Please see agreements between Caltrans and Brightline West and between Caltrans and CDFW attached.

Attachments:

- Exhibit A: Project Programming Request Form
Exhibit B: Project Report
Exhibit C: Performance Metrics Form *(if applicable)*

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

Project Name **I-15 MOJAVE WILDLIFE CROSSINGS**

Resolution **SHOPP-P-2425-03B**

(to be completed by CTC)



Nader Naquib
Project Manager
Project Applicant

10/22/24

Date

Signed by:


1CF1C2B8D9C5418...
President
BLW
Implementing Agency

10/14/2024

Date



Catalino A. Pining III
District Director
California Department of Transportation

10/14/2024

Date



FOR **Tony Tavares**
Director
California Department of Transportation

11/14/2024

Date



Tanisha Taylor
Executive Director
California Transportation Commission

10/31/2025

Date

December CTC SB1 SHOPP Baseline Agreement Review

Final Audit Report

2024-11-14

Created:	2024-11-14
By:	Lauren Applegate (s147989@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAASxIlwAELUITJqbPCqLhdk9H-Rlb7ydlw

"December CTC SB1 SHOPP Baseline Agreement Review" History

-  Document created by Lauren Applegate (s147989@dot.ca.gov)
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-  Email viewed by Michael Keever (mike.keever@dot.ca.gov)
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-  Document e-signed by Michael Keever (mike.keever@dot.ca.gov)
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-  Agreement completed.
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Baseline agreement information was extracted from Caltrans' project data systems. Project description, funding and performance measures are from CTIPS. Project delivery milestones are from PRSM. All information is current and accurate.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

BASELINE AGREEMENT

Date:	10/16/24 02:54:49 PM
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District	EA	Project ID		PPNO	Project Manager
08	1N590	0823000021		3021K	NAGUIB, NADER N
County	Route	Begin Postmile	End Postmile	Implementing Agency	
SBD	15	R 114.0	171.5	PA&ED	Caltrans
				PS&E	Brightline West
				Right of Way	Brightline West
				Construction	Brightline West

Project Nickname

I-15 MOJAVE WILDLIFE CROSSINGS

Location/Description

Near Baker, from 2.4 miles north of Afton Road to 5.0 miles south of Nipton Road. Construct three wildlife crossings. Additional contribution of \$1,500,000 for PA&ED, \$2,250,000 for PS&E, \$60,000 for R/W support, \$5,260,000 for Construction Support, and \$23,861,000 for Construction Capital from Brightline West and California Department of Fish and Wildlife.

Legislative Districts

Assembly:	34	Senate:	19	Congressional:	23
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PERFORMANCE MEASURES

	Primary Asset	Good	Fair	Poor	New	Total	Units
Existing Condition	Sustainability and Miscellaneous (Locations)			0		0	Locations
Programmed Condition	Sustainability and Miscellaneous (Locations)				3	3	Locations

Project Milestone

	Actual	Planned
Project Approval and Environmental Document Milestone	06/12/24	
Right of Way Certification Milestone		02/03/25
Ready to List for Advertisement Milestone		02/03/25
Begin Construction Milestone (Approve Contract)		04/01/25

FUNDING (Allocated amounts are shaded)

Component	Fiscal Year	SHOPP					Total
PA&ED	23/24	4,500					4,500
PS&E	23/24	3,008					3,008
RW Support	23/24	213					213
Const Support	23/24	4,500					4,500
RW Capital	23/24	652					652
Const Capital	23/24	84,064					84,064
Total		96,937					96,937

Memorandum

To: RICHARD STONE
SHOPP
HQ Financial Programming

Date: October 16, 2024

File: 08-1N590
0823000021


From: Nader Naguib, PE
Project Manager
District 8

Subject: PROJECT STATUS UPDATE

This memorandum is written to accompany the Baseline Agreement for the referenced project.

Project 08-1N590 (PM R114.0/171.5) was amended into the 2022 SHOPP on June 29, 2023 using IJA funding. It was programmed with Caltrans as the implementing agency for PA&ED, Design and Construction. The project proposes to construct 3 wildlife crossings along I-15 for bighorn sheep and other wildlife to provide safe and sustainable passages and restore connectivity. Shortly after 08-1N590 was programmed, Senate Bill (SB) 145 was passed on July 10, 2023. SB 145 authorized Caltrans to enter into agreements with Brightline West for the purpose of project efficiencies between the wildlife crossings project and the Brightline West High-Speed train project. The wildlife crossings project locates within the limits of the Brightline West project, and both will be constructed at the same time frame. The two-party agreement between Caltrans and Brightline was executed on June 28, 2024 (attached). Per the agreement, Brightline assumes responsibility for designing, procuring, delivering, constructing the three wildlife crossings. Brightline will utilize a competitive bidding process to solicit bids to construct the wildlife crossings. The project performance measure is 3 Locations (3 new bridges) under program code 20.XXX.201.999, as mentioned in the project report and PPR.

The following changes have occurred as a result of the passage of SB 145: a) Caltrans role has now changed from lead agency to oversight for all phases except PA&ED and Right-of-Way, Brightline will be the lead agency for Design and Construction; b) Caltrans has executed a grant agreement with CDFW whereby CDFW agreed to fund \$20 million toward construction capital; c) the Brightline West project schedule was delayed and the following CTC actions were requested: 1. Requested a 2-months allocation time extension for phase 1, 2 and 9 at the August 2024 CTC meeting; 2. Requested a 12-months allocation time extension for phase 3 and phase 4 at the August CTC meeting. The following tables show the current schedule and cost estimates for various phases as a result of Brightline West project delay and Caltrans role change from lead agency to oversight.

October 16, 2024
Page 2 of 2

A PCR to adjust the cost discrepancies from programmed to current estimates is not doable at this time as the project delivery is scheduled for the current FY 24/25.

Milestone	Current Schedule (PR)	Proposed Dates
R/W Cert M410	09/01/2024	02/03/2025
RTL M460	09/01/2024	02/03/2025
Approve Contract M500	01/01/2025	04/01/2025

Current and Proposed Funds (In Thousands):

Component	Programmed	PR	Current Estimate
PAED Support	4,500	4,500	4,500
PS&E Support	6,750	3,000	3,008
RW Support	180	180	213
Const. Support	15,780	4,500	4,500
RW Capital	652	652	652
Const. Capital	71,583**	84,064	84,064

*** In addition to the \$71,583,000 programmed under SHOPP, CDFW contributed \$20,000,000 towards construction capital per grant agreement # Q2396066*

C: Meardey Tim
Martin Villanueva
Md Shaheed

Project Report For Project Approval

On Route Interstate 15 (I-15)

Between 2.4 miles north of Afton Road Overcrossing

And 0.1 mile north of Bailey Road Overcrossing

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current and accurate:

cs *Dustin Ladd* for Rebecca Guirado
REBECCA GUIRADO, District Division Chief, Right-of-Way

APPROVAL RECOMMENDED:

RR *Nader Naguib*
NADER NAGUIB, Project Manager

AB *Haissam Yahya*
HAISSAM YAHYA, Deputy District Director, Traffic Operations

CW *Kurt Heidelberg*
KURT HEIDELBERG, Deputy District Director, Environmental Planning

GH *Jesus Galvan Jr*
JESUS GALVAN, Deputy District Director, Design

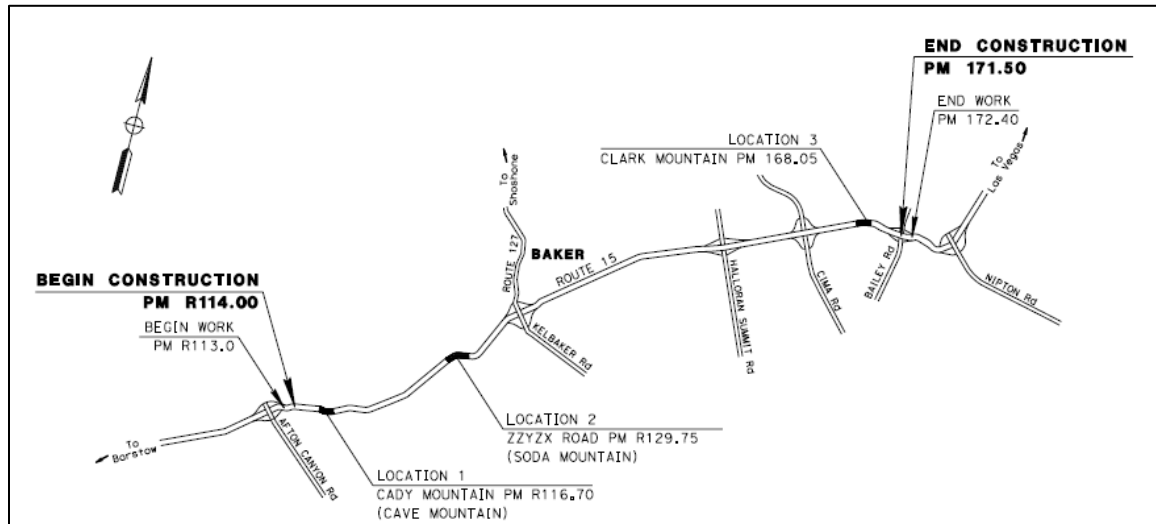
PROJECT APPROVED:

Catalino A. Pinning III
CATALINO A. PINING III, District 8 Director

06/12/2024

Date

Vicinity Map



On I-15 in San Bernardino County near Baker at three locations from 2.4 miles north of Afton Road Overcrossing to 0.1 mile north of Bailey Road Overcrossing.

This project report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



HA VU, REGISTERED CIVIL ENGINEER

6/4/2024

DATE



Concurred by:



Tuan Truong, Office Chief, Design N

6/4/2024

Date

Agreement 08-1786
 Project ID 0823000021
 EA 1N590
 08-SBd- R116.70/ R129.75/168.05

Wildlife Crossing Development Agreement

This Wildlife Crossing Development Agreement ("AGREEMENT") is entered into as of June 28, 2024 (the "EFFECTIVE DATE") by and between DesertXpress Enterprises, LLC, a Nevada limited liability company d/b/a Brightline West ("BLW") and the State of California Department of Transportation ("CALTRANS").

RECITALS

A. BLW proposes to construct a privately owned and operated electrified high-speed passenger railroad between Southern California and Las Vegas, Nevada. The fully grade-separated line will be constructed primarily in the Interstate 15 ("I-15") right of way on an alignment that will largely run in the median of the freeway. The high-speed railroad will be constructed as two projects, one between Las Vegas and Apple Valley, California and the other between Apple Valley and Rancho Cucamonga, California. Together, the two projects will form a single system that will provide high-speed rail service between Rancho Cucamonga and Las Vegas (the "BLW SYSTEM").

B. CALTRANS is a California state agency with full possession and control of all state highways, property, and rights in property acquired for state highway purposes. CALTRANS and BLW have entered Right of Way Use Agreements dated June 19, 2020, and December 15, 2023 (the "LEASES"). Together, the LEASES allow BLW to use a portion of the width of the I-15 freeway right-of-way within California for construction and operation of the BLW SYSTEM.

C. The California Department of Fish and Wildlife ("CDFW") has prioritized remediation of wildlife barriers through the I-15 in the same corridor where the BLW SYSTEM will be constructed. Dedicated crossings would provide a sustainable and safe path for wildlife connectivity over the existing northbound and southbound highway lanes and the future high-speed rail corridor to be built in the median. CDFW has studied and identified three priority locations (Cady Mountain, aka Cave

Mountain, at PM R116.70; Zzyzx Road, aka Soda Mountain, at PM R129.75; and Clark Mountain at PM 168.05) where the construction of overcrossings across the entire width of the I-15 corridor for use as dedicated wildlife crossings will protect wildlife, enhance wildlife movement (especially for big-horn sheep), and connect and enhance wildlife habitats (the "I-15 Mojave Wildlife Crossings"). Efficiencies are available that will improve the feasibility of constructing the I-15 Mojave Wildlife Crossings if they are constructed concurrently with the current construction implementation schedule of the BLW SYSTEM.

D. In February 2023, CALTRANS, CDFW, and BLW entered an agreement to memorialize their commitment to design and construct the I-15 Mojave Wildlife Crossings (the "MOU"). **Streets and Highways Code**, Section 143.2 was passed into law on July 10, 2023, to help facilitate the implementation of the MOU.

E. CALTRANS is authorized under **Streets and Highways Code** section 143.2(b)(1)-(5) to, without limitation, conduct the following key activities: (1) negotiate for and enter into an authorized agreement with BLW to develop, design, procure, and construct the I-15 Mojave Wildlife Crossings; (2) determine and appropriate any lawful source of funding or financing for the development or construction of these crossings; and (3) apply for a competitive grant from federal grant programs to fund activities associated with construction of these crossings. Under the statute, CALTRANS must also consult with CDFW and with entities with expertise in the development, design, and construction of wildlife overcrossing structures as part of the development process.

F. Together, the I-15 Mojave Wildlife Crossings are referred to herein as the "PROJECT" and CALTRANS is the public sponsor of this PROJECT.

G. The parties now wish to enter this AGREEMENT to memorialize the terms under which the PROJECT will be designed, constructed, and maintained.

AGREEMENT

Now, therefore, the parties hereby agree as follows:

ARTICLE I – PROJECT DEVELOPMENT

Section 1 Incorporation of Recitals

The recitals set forth above are hereby incorporated in the terms of the AGREEMENT.

Section 2 Definitions

For the purpose of this AGREEMENT, the following terms will have the meanings set forth below:

2.1 AGREEMENT has the meaning set forth in the preamble.

2.2 BLW SYSTEM has the meaning as set forth in Recital A.

2.3 BLW WORK has the meaning as set forth in Article I, Section 3.1

2.4 CALTRANS STANDARDS are defined as standard and directive drawings, including as applicable: any applicable FHWA standards; CALTRANS' Standard Specifications; CALTRANS' Standard Plans; applicable elements of CALTRANS' Seismic Design Criteria, Version 2.0, as determined by BLW and CALTRANS; CALTRANS' manuals (including, but not limited to, Construction Manual, Highway Design Manual, California Manual on Uniform Traffic Control Devices) and technical memoranda; CALTRANS' guidelines, including the guidance provided in the District 8 Quality Improvement Practices and Quality Management Plan, and Construction Manual Supplement for Local Agency Engineers, Local Agency Structure Representative Guidelines, Construction Manual Supplement for Local Agency Resident Engineers, Office of Quality Assurance and Source Inspection Source Inspection Guidelines for Local Agencies (SIGLA) Manual; and CALTRANS' plans, policies, practices, and procedures, including the guidance provided in CALTRANS' Plans Preparation Manual, the Project Development Procedures Manual, and guidance provided in CALTRANS' Stormwater Monitoring Guidance Manual, which are generally available at <http://dot.ca.gov>. The District 8 Quality Improvement Practices and Quality Management Plan can be obtained through request to CALTRANS.

2.5 CEQA means the California Environmental Quality Act.

2.6 CLAIMS has the meaning set forth in Article 2, Section 3.1.

2.7 CLOSURE STATEMENT means the document that verifies the completion of all QUALITY MANAGEMENT ASSESSMENT performed by CALTRANS related to BLW WORK and evidences a final account of all BLW WORK performed under the ENCROACHMENT PERMITS to construct and will not be executed by CALTRANS prior to final relief from maintenance.

2.8 CONCEPT PLAN has the meaning given in Article 1, Section 8.6.

2.9 CONSTRUCTION CAPITAL means the capital funds outlay programmed by CALTRANS for construction, not including CONSTRUCTION MANAGEMENT COSTS.

2.10 CONSTRUCTION MANAGEMENT means all activities undertaken by BLW for the PROJECT that are required for the administration, acceptance, and final documentation of the PROCUREMENT PACKAGE and CONSTRUCTION WORK for the PROJECT.

2.11 CONSTRUCTION MANAGEMENT COSTS means the costs to support construction of the PROJECT.

2.12 CONSTRUCTION WORK means all activities undertaken by BLW in support of the PROJECT during construction, including CONSTRUCTION MANAGEMENT, surveying/staking, quality assurance, quality control to provide without limitation materials testing, ensuring regulatory compliance, and CALTRANS STANDARDS compliance as needed to build the PROJECT.

2.13 CTC means the California Transportation Commission.

2.14 DESIGN ENGINEERING is defined in the following three phases:

(a) PRELIMINARY ENGINEERING (PE) DESIGN takes a project from a conceptual state to a level of project design definition that describes the project's technical and architectural approach in order to address environmental and community impacts, interfaces with utilities and existing

infrastructure/facilities, operational characteristics, and estimate of project costs and a project execution schedule. This phase encompasses 30% plans.

(b) DESIGN DEVELOPMENT validates schematic design concepts and system criteria and develops a clear indication of design solutions for requirements outlined in the PE DESIGN phase. At the completion of DESIGN DEVELOPMENT, major features of the architectural and structural design and third-party interfaces have advanced in conjunction with performance specifications, thereby providing the basis for FINAL DESIGN.

(c) FINAL DESIGN provides the detailed design and technical specifications for all temporary and permanent project improvements and is equivalent to complete and final Plans, Specifications and Estimate (PS&E). This phase addresses and resolves all DESIGN DEVELOPMENT review comments, construction issues, and third party comments and finalizes all engineering, architectural, and system designs necessary for construction documents. This phase encompasses 100% plans and specifications to release for construction.

2.15 EFFECTIVE DATE has the meaning set forth in the Preamble.

2.16 ENCROACHMENT PERMITS are the CALTRANS permits required for the construction of the PROJECT as it impacts the SHS, as defined in Section 660 of the California Streets and Highways Code. There may be one or more permits required for construction, including without limitation any encroachment permits needed for temporary construction staging, temporary traffic control measures, etc.

2.17 FHWA means the Federal Highway Administration.

2.18 HAZARDOUS MATERIAL means any hazardous substance, hazardous material, or hazardous waste as defined under state or federal law and any substance, waste, or other material of any nature that may give rise to liability or regulatory action under federal or state law.

2.19 INDEMNIFIED PARTIES has the meaning set forth in Article 2, Section 3.1.

2.20 MAJOR CHANGES means any of the following types of changes which occur after issuance of the ENCROACHMENT PERMITS to construct: (i) any changes

affecting public safety, public convenience, protected environmental resources, the preservation of property, (ii) ~~all approved plans~~ ^{SHOPP-P-2425-03B} and specification changes; or (iii) change orders in excess of fifty thousand dollars (\$50,000) between BLW and its contractors.

2.21 NEPA means the National Environmental Policy Act.

2.22 NON-CONFORMING WORK means materials or work not substantially conforming during construction of the PROJECT to the requirements of the CALTRANS STANDARDS in effect as of the date the ENCROACHMENT PERMITS to construct are issued.

2.23 PROCUREMENT PACKAGE means the development of all documents, including DESIGN ENGINEERING inclusive of any Plans, Specifications and Estimates generally consistent with the CALTRANS Workplan Standards Guide, the obtaining of any resource agency permits, and those contracts, delivery methods, specifications, standards, and any evaluation metrics needed to select/award a contract for construction.

2.24 PROJECT COMPONENTS – Each PROJECT COMPONENT is defined in the CALTRANS Workplan Standards Guide as a distinct group of activities/products in the project planning and development process.

2.25 PS&E has the meaning set forth in Article 1, Section 2.14(c).

2.26 RESIDENT ENGINEER is a BLW construction personnel who is responsible for the contract administration and construction engineering of the PROJECT. The RESIDENT ENGINEER must be licensed in the State of California as a civil Professional Engineer (PE) and will have delegated authority from BLW to stop work on the PROJECT. For avoidance of doubt, as an efficiency, the RESIDENT ENGINEER may serve in the same capacity as a resident engineer for construction of the BLW SYSTEM.

2.27 QUALITY MANAGEMENT ASSESSMENT or QMA means CALTRANS' independent activities performed by CALTRANS, at CALTRANS' sole discretion, which it will not exercise unreasonably or arbitrarily, to assure and verify, as needed, that the PROJECT is designed and constructed in compliance with applicable standards, laws, regulations, and policies to the extent they impact the SHS.

2.28 QUALITY MANAGEMENT PLAN or QMP includes conformity to the District 8 Quality Improvement Practices and Quality Management Plan guidance and all other procedures necessary to ensure the PROJECT is designed and constructed in accordance with CALTRANS STANDARDS.

2.29 RIGHT-OF-WAY includes coordination with utility owners for the protection, removal, or relocation of utilities; the acquisition of right-of-way interests; and post-construction work such as right-of-way monumentation/recordation, relinquishments/vacations, and excess land transactions. The RIGHT-OF-WAY component budget identifies the cost of the capital costs of right-of-way acquisition (RIGHT-OF-WAY CAPITAL) and the cost of the staff work in support of the acquisition (RIGHT-OF-WAY SUPPORT).

2.30 SHS means the California State Highway System.

Section 3 Scope

3.1 BLW will prepare all DESIGN ENGINEERING, will prepare a PROCUREMENT PACKAGE, and will perform CONSTRUCTION MANAGEMENT and construction of the PROJECT, altogether referred to as BLW WORK. BLW WORK will be performed as a separate initiative independent from the design, permitting, and construction of the BLW SYSTEM. Notwithstanding the previous sentence, BLW anticipates implementing efficiencies in the performance of both projects concurrently. BLW will manage BLW WORK with its schedule and delivery of the BLW SYSTEM, so as to deliver the PROJECT concurrently with the BLW SYSTEM.

3.2 The programmed CONSTRUCTION CAPITAL cost for the PROJECT is currently ninety-one million five hundred eighty-three thousand dollars (\$91,583,000).

3.3 The PROJECT includes the following elements: three grade-separated wildlife crossings of a structure-type construction which is approved for use by CALTRANS, wildlife directional fencing and escape ramps, wildlife approach ramps, engineered habitat areas, wildlife electronic monitoring equipment on the structures, and structures aesthetics.

3.4 BLW WORK will be implemented by any delivery method as determined and procured by BLW, in conformance with Article I, Section 4.14.

Section 4 Roles and Responsibilities

CALTRANS Roles and Responsibilities:

4.1 CALTRANS is the public sponsor of the PROJECT and will be the owner of the PROJECT and will accept operation, maintenance, and ownership or title to all materials and equipment installed as part of the BLW WORK. As needed, CALTRANS will establish a Long-Term Management Plan with CDFW concerning the wildlife electronic monitoring equipment to be constructed within the overcrossings as part of the PROJECT.

4.2 CALTRANS is responsible for securing the financial resources to fund the CONSTRUCTION CAPITAL, including the cost of any MAJOR CHANGES.

4.3 MAJOR CHANGES to the PROJECT will require CALTRANS concurrence as the owner/operator of the SHS and as owner/operator of the PROJECT.

4.4 CALTRANS is the CEQA lead agency.

4.5 The FHWA has assigned CALTRANS to act on its behalf for NEPA compliance. For purposes of this AGREEMENT, CALTRANS is the NEPA Lead Agency for the PROJECT.

4.6 CALTRANS will obtain and renew any resource agency permits for the PROJECT.

4.7 Per NEPA assignment and CEQA statutes, CALTRANS will perform environmental document quality control and NEPA assignment review procedures for environmental documentation. CALTRANS quality control and quality assurance procedures for all environmental documents are described in the NEPA Assignments memorandums, available at https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/policy-memos#LinkTarget_705. This also includes the independent judgement analysis and determination under CEQA that the environmental documentation meets CEQA requirements.

4.8 CALTRANS is responsible for all RIGHT-OF-WAY work related to the PROJECT. CALTRANS will obtain any Bureau of Land Management (BLM) right of way transfer and FHWA authorizations required for the PROJECT.

4.9 CALTRANS will approve the BLW WORK in accordance with CALTRANS STANDARDS, applicable state and federal law, and as described in this AGREEMENT.

BLW Roles and Responsibilities:

4.10 In general conformance with CALTRANS STANDARDS and project-specific design criteria as agreed to between the parties, BLW will prepare or cause to be prepared the DESIGN ENGINEERING for CALTRANS review of the design PS&E and CALTRANS review of the PROCUREMENT PACKAGE prior to bid.

4.10.1 The parties agree that (i) CALTRANS is not anticipated to have privity with BLW's selected contractors, and (ii) the PROCUREMENT PACKAGE is anticipated to reflect the fact that no contractual relationship is to be created between BLW's selected contractors and CALTRANS.

4.11 BLW will prepare a detailed cost estimate for the PROJECT using CALTRANS standard bid items, in accordance with CALTRANS STANDARDS. The estimate will be provided no later than with the PROCUREMENT PACKAGE submittal in order to provide CALTRANS sufficient opportunity to perform an independent cost estimate as verification and as part of CALTRANS' QMA.

4.12 BLW will incorporate aesthetics into the structures and the PROJECT in accordance with Visual Impact Analysis (VIA) performed for the PROJECT. Modifications to the aesthetics shown in the VIA will be subject to CALTRANS' review and approval.

4.13 BLW will coordinate with CDFW to determine design requirements for all wildlife electronic monitoring equipment within the crossings, wildlife direction fencing limits and detail, wildlife escape ramps, and wildlife crossing guards.

4.14 BLW will ensure a competitive bid process for the PROCUREMENT PACKAGE under Title 23 of the United States Code, Section 112 and all applicable state and federal laws.

4.15 BLW is responsible for managing the scope and schedule of the PROJECT.

4.16 BLW will provide a design QMP, construction QMP, a construction material and Source Inspection QMP (SIQMP), and a structures construction QMP prior to issuance of the applicable ENCROACHMENT PERMIT. These QMPs describe BLW's quality policy and how it will be applied and will conform to CALTRANS STANDARDS. All QMPs are subject to CALTRANS review and approval prior to issuing the ENCROACHMENT PERMITS for construction.

4.17 BLW will construct the PROJECT and will provide CONSTRUCTION MANAGEMENT for the PROJECT.

4.18 BLW will follow the CALTRANS encroachment permit process to complete the PROJECT.

4.19 BLW is responsible for post-construction PROJECT close-out activities.

4.20 BLW will assist CALTRANS with billing and reporting commitments required by the funding guidelines for all contributed funds that are programmed and allocated by the CTC or that are granted by any other means as CONSTRUCTION CAPITAL for the PROJECT. CALTRANS will provide all documents and information in CALTRANS' possession to enable BLW to assist with the CALTRANS reporting and billing commitments.

4.21 BLW will support CALTRANS (and CDFW as may be the case) to secure all necessary entitlements and permits.

4.22 BLW will provide support for any federal and state grant applications sought by CALTRANS (and CDFW as may be the case) to fund the CONSTRUCTION CAPITAL for the PROJECT.

4.23 Any party responsible for completing any PROJECT COMPONENT will make its personnel and consultants that prepare the PROJECT COMPONENT available to help resolve related problems and changes for the entire duration of the PROJECT.

Section 5 Funding

BLW:

5.1 At no cost to CALTRANS, BLW will prepare the DESIGN ENGINEERING, develop the PROCUREMENT PACKAGE, and perform CONSTRUCTION MANAGEMENT.

5.2 The BLW contribution towards the total PROJECT cost estimate is shown on the budget summary, attached as Exhibit A and made a part of this AGREEMENT.

CALTRANS:

5.3 CALTRANS will fund one hundred percent (100%) of all CONSTRUCTION CAPITAL. Notwithstanding the current programmed CONSTRUCTION CAPITAL costs, CALTRANS will pay BLW the actual CONSTRUCTION CAPITAL costs of the PROJECT from the State Highway Operation and Protection Program (SHOPP) as allocated for the PROJECT or from any other state or federal grant funds received by application of CALTRANS or CDFW.

5.4 CALTRANS will fund one hundred percent (100%) of the following additional PROJECT-related costs:

- (a) CALTRANS services, which include but are not limited to QUALITY MANAGEMENT ASSESSMENT (QMA), CEQA/NEPA Lead Agency work (when applicable), and related Environmental Quality Control and Assurance (EDQC) as defined in the CALTRANS Standard Environmental Reference (SER);
- (b) Obtaining, implementing, and renewing resource agency permits; and
- (c) All PROJECT RIGHT-OF-WAY CAPITAL and RIGHT-OF-WAY SUPPORT.

5.5 The CALTRANS contribution towards the total PROJECT cost estimate is shown on the budget summary, attached as Exhibit A and made a part of this AGREEMENT.

Section 6 CALTRANS Quality Management

6.1 CALTRANS, as the owner/operator of the State Highway System (SHS), will perform quality management work including QUALITY MANAGEMENT ASSESSMENT and owner/operator approvals for the portions of BLW WORK within the existing and proposed SHS right-of-way.

6.2 BLW acknowledges that CALTRANS QMA efforts are to ensure that BLW's quality assurance results in BLW WORK that is in accordance with the applicable CALTRANS STANDARDS and each of the PROJECT's quality management plans (QMPs). QMA does not include any efforts necessary to develop or deliver BLW WORK or any validation by verifying or rechecking BLW WORK.

6.3 When CALTRANS performs QMA, it does so for the benefit of CALTRANS and exercised at CALTRANS' sole discretion, which it will not exercise unreasonably or arbitrarily, and will not constitute acceptance, approval, or ratification of any work or process, and any reliance on the design and development of the PROCUREMENT PACKAGE by BLW or its contractor is at the sole risk of BLW and the contractor.

6.4 CALTRANS, as the owner/operator of the SHS, will approve DESIGN ENGINEERING for the PROJECT in accordance with CALTRANS policies and guidance and as described in this AGREEMENT.

Section 7 Environmental Permits, Approvals and Agreements

7.1 BLW will comply with the commitments and conditions set forth in the environmental documentation, environmental permits, approvals, and applicable agreements as those commitments and conditions apply to BLW's responsibilities in this AGREEMENT (with the understanding that these potential requirements do not affect the BLW SYSTEM.)

7.2 The PROJECT may require the following environmental permits/approvals (with the understanding that these potential requirements do not affect the BLW SYSTEM):

ENVIRONMENTAL PERMITS/REQUIREMENTS
404, US Army Corps of Engineers
401, Regional Water Quality Control Board
National Pollutant Discharge Elimination System (NPDES), State Water Resources Control Board
1602 California Department of Fish and Wildlife
Other Permits

7.3 CALTRANS will provide BLW with a copy of all environmental permits, approvals, and agreements from resource and regulatory agencies, including the terms and conditions of the permits, approvals, and agreements.

Section 8 Project Design

8.1 BLW will design the PROJECT in accordance with all applicable CALTRANS STANDARDS. In addition, BLW will conform to project-specific design criteria created by its experts in concurrence with and as approved by CALTRANS.

8.2 BLW will select a structure type for the PROJECT that complies with applicable elements of CALTRANS' Seismic Design Criteria, Version 2.0, as determined by BLW and CALTRANS and described in the project-specific design criteria. Compliance with this standard will be demonstrated to and approved by CALTRANS during the type-selection process prior to FINAL DESIGN approval.

8.3 BLW will provide CALTRANS with a copy of design documents and construction documents, including all relevant QMPs for CALTRANS' QMA review and approval. CALTRANS will provide BLW with written review comments. At its discretion, CALTRANS may perform its QMA review using a combination of its own employees, contractors, and consultants.

8.4 BLW will prepare Utility Conflict Maps identifying the accommodation, protection, relocation, or removal of any existing utility facilities that conflict with construction of the PROJECT.

8.5 BLW will provide CALTRANS a copy of the Utility Conflict Maps one hundred twenty (120) days prior to construction. All utility conflicts will be addressed in the DESIGN ENGINEERING.

8.6 BLW will prepare a Wildlife Crossings Aesthetics and Landscape Concept Plan ("CONCEPT PLAN") for the PROJECT in consultation with CDFW and CALTRANS, based on the Environmental Documents for the PROJECT completed October 16, 2023. BLW will submit the CONCEPT PLAN to CALTRANS for review and approval at the PRELIMINARY ENGINEERING DESIGN phase of DESIGN ENGINEERING. The CONCEPT PLAN will include all structures design elements, including form, scale, material, texture, color, and details, as well as plantings and materials to be used on the crossing surface and adjacent impacted areas. BLW will prepare Landscape and Erosion Control Plans that use native vegetation, boulders, gravel, rocks, and soils found in the area to blend the structures and surrounding area with the existing environment. Grading for the PROJECT will use slope rounding concepts to avoid sharp edges and flat planes to smoothly blend with the surrounding terrain.

8.6.1 BLW will incorporate aesthetics into the structures and the PROJECT in accordance with the Visual Impact Analysis (VIA) for Interstate 15 Mojave Wildlife Crossings dated September 1, 2023, that was performed for the PROJECT. Modifications to the aesthetics shown in the VIA will be subject to CALTRANS review and approval.

Section 9 Construction

9.1 BLW is responsible for all CONSTRUCTION WORK except those activities and responsibilities that are assigned to another party and those activities that are excluded under this AGREEMENT.

9.2 BLW will construct the PROJECT in accordance with current CALTRANS STANDARDS and applicable requirements for wildlife crossings through consultation with BLW's experts and CDFW.

9.3 BLW will implement its approved QMP during CONSTRUCTION.

9.4 BLW will provide a RESIDENT ENGINEER during CONSTRUCTION. BLW will also designate one structure representative who will be directly responsible for PROJECT structures construction work, including, without limitation, the oversight, documentation, and field engineering of structure items, and will have the requisite specialty in California. The designated RESIDENT ENGINEER and structure representative must be licensed in California as professional civil engineers and each have ten (10) years experience administering CALTRANS projects.

9.5 Bonding.

9.5.1 BLW will furnish and deliver to CALTRANS a payment bond and a performance bond guaranteeing the PROJECT completion. In each case, the payment bond and the performance bond will be a single instrument provided by BLW's contractor for the benefit of both BLW and CALTRANS. The payment and performance bonds will be in a form acceptable to CALTRANS, issued by an admitted surety, and will name CALTRANS as an additional obligee. The payment bond will conform to requirements of Civil Code, Section 8600 et seq.

9.5.2 The payment bond will be for 100% and the performance bond will be for fifty percent (50%) of the cost to complete the PROJECT, including the costs of BLW's administration and contracts. The parties will jointly determine the estimated PROJECT completion costs.

9.5.3 In the event of any breach or default in performance by BLW or its contractor, CALTRANS will look to the performance bond surety secured by the BLW contractor to complete the PROJECT.

9.6 Encroachment Permit. CALTRANS will not issue an ENCROACHMENT PERMIT to BLW until the following conditions are met:

(a) CALTRANS approves FINAL DESIGN;

(b) CALTRANS accepts and approves the relevant construction QUALITY MANAGEMENT PLAN; and

(c) CALTRANS considers and responds to BLW's recommendation of award for a construction contract in response to the PROCUREMENT PACKAGE.

- i. If the recommendation of award for a construction contract is greater than the funding commitment to CONSTRUCTION CAPITAL, the parties must agree in writing on a course of action within fifteen (15) working days. If no agreement is reached within fifteen (15) working days, BLW will not award the construction contract.
- ii. If new costs arise during construction that will cause the total construction costs to exceed the funding commitment to CONSTRUCTION CAPITAL, CALTRANS will develop a solution to meet its obligation to fund the PROJECT under Article I, Section 5.2. at no cost to BLW.

9.7 The relevant QMPs for construction will describe how BLW will perform construction material verification and workmanship inspections at manufacturing sources and the project job site. The construction material and Source Inspection Quality Management Plan (SIQMP) are subject to review and approval by CALTRANS.

9.7.1 The QMPs will include a written documentation process for BLW to identify, document, and respond to NON-CONFORMING WORK, as may occur from time to time during construction.

9.8 CALTRANS will review and concur with:

(a) All MAJOR CHANGES, which must receive written concurrence by CALTRANS prior to implementation. CALTRANS will be provided a reasonable time to review and give written concurrence (or denial) of MAJOR CHANGES.

(b) The Stormwater Pollution Prevention Plan (SWPPP) or the Water Pollution Control Plan (WPCP).

9.9 Upon reasonable notice and justification, BLW agrees to suspend CONSTRUCTION WORK upon request by CALTRANS for the purpose of protecting public safety, preserving property, and ensuring that all CONSTRUCTION WORK is consistent with the function and safe operation of the SHS.

9.10 BLW is designated as the Legally Responsible Person pursuant to the Construction General Permit, State Water Resources Control Board (SWRCB) Order Number 2022-00578-DWQ, (adopted September 8, 2022) and effective September 1, 2023, and assumes all roles and responsibilities assigned to the Legally Responsible Person as mandated by the Construction General Permit. BLW is required to comply with the CALTRANS MS4 National Pollutant Discharge Elimination System (NPDES) Permit Order 2022-0033-DWQ for all work within the State Highway System.

9.11 As part of construction of the BLW SYSTEM, BLW is responsible for maintenance of the SHS within the PROJECT limits.

9.12 BLW will ensure that all PROJECT construction takes place within the SHS right of-way.

9.13 BLW will furnish CALTRANS with written quarterly progress reports during CONSTRUCTION WORK.

9.14 Upon completion of BLW WORK, ownership or title to all materials and equipment constructed or installed for the operations and/or maintenance of the SHS and within SHS right-of-way as part of the BLW WORK become the property of CALTRANS.

9.15 BLW will prepare the as-builts in accordance with CALTRANS STANDARDS and BLW will provide them to CALTRANS prior to execution of the CLOSURE STATEMENT. The plans will have the RESIDENT ENGINEER's name and plans acceptance date printed on each plan sheet, with the RESIDENT ENGINEER's signature on the title sheet. The as-built plans are subject to review and acceptance by CALTRANS.

9.15.1 The as-built submittal must also include all CALTRANS requested contract records and land survey documents. The land survey documents include monument preservation documents and records of surveys prepared to satisfy the requirements of the California Professional Land Surveyors Act (Business and Professions Code, Sections 8700 – 8805). Copies of survey documents and Records of Surveys filed in accordance with Business & Professions Code, Sections 8762 and 8771, will contain the filing information provided by the county in which filed.

Section 10 Construction Warranties

10.1 BLW warrants that:

(a) All DESIGN furnished pursuant to the AGREEMENT will conform to all professional engineering principles generally accepted as standards of the industry in the state of California, as applicable under CALTRANS STANDARDS.

(b) The PROJECT will be free of defects (except to the extent that such defects are inherent in prescriptive specifications included in the AGREEMENT, unless (i) BLW has actual or constructive knowledge of such defects, and (ii) BLW fails to request a change thereto by CALTRANS.)

(c) Materials and equipment furnished under the AGREEMENT and the ENCROACHMENT PERMIT to construct will be of good quality and when installed, will be new.

(d) BLW WORK will meet all of the requirements of the AGREEMENT. The specifications and drawings selected or prepared for use during construction are appropriate for their intended use. The PROJECT will be fit for use for the intended function pursuant to and in accordance with the terms of the AGREEMENT.

10.2 The warranty term will begin upon execution of the CLOSURE STATEMENT for the PROJECT by CALTRANS. Subject to limited extension under Article 1, Section 10.11, the warranties regarding structures of the PROJECT will remain in effect until three (3) years after the start of the warranty term. The warranties regarding all other elements of the PROJECT will remain in effect until one (1) year after the start of the warranty term. If CALTRANS determines that any of the BLW WORK has not met the standards set forth in this Article 1, Section 10 at any time within the warranty period, then BLW will correct the BLW WORK as specified below, even if the performance of the corrective work extends beyond the warranty period.

10.3 CALTRANS and BLW will conduct a walkthrough of the PROJECT together at least one (1) time per year before the expiration of the warranty period. On each walkthrough, CALTRANS will produce a punch list of any items requiring warranty

corrective work. In addition, CALTRANS reserves the right at any time during the warranty period to identify any BLW WORK that fails to meet the warranty.

10.4 BLW may also monitor the PROJECT using non-destructive testing for any warranty corrective work required during the warranty period. BLW will provide five (5) business days advance notification to CALTRANS of all monitoring dates and times.

10.5 CALTRANS will notify BLW of any failure of any BLW WORK that is BLW's or any BLW contractor's responsibility to correct under the terms of the warranty. BLW will correct any areas which exceed the warranty threshold limits established for the PROJECT. CALTRANS may require corrective actions at any time within the warranty period or defer corrective action until the end of the initial warranty period.

10.6 For all corrective actions required, BLW will provide a written proposal for performing warranty work within ten (10) working days from receiving notification from CALTRANS that corrective work is required. BLW will also provide a written proposal for performing the corrective work if BLW elects to perform this work based on BLW's assessment of the PROJECT. The proposal will include, as a minimum:

- a) The proposed construction remedy.
- b) The proposed schedule for prosecution and completion of the work.
- c) The proposed Transportation Management Plan if required.

10.7 CALTRANS will respond as to the adequacy and suitability of the proposal within ten (10) working days of the date of BLW's submittal. CALTRANS may agree to accept nonconforming work.

10.8 During the warranty period, BLW will not be held responsible for distresses caused by identifiable factors unrelated to materials and workmanship. Upon written request from BLW and on a case-by-case basis, CALTRANS will consider other factors that appear to be beyond the control of BLW and may relieve BLW from its warranty obligations with respect thereto.

10.9 BLW will begin corrective action work within thirty (30) calendar days after notice by CALTRANS of acceptance of the written plan for warranty correction. If the work cannot be started then because of seasonal limitations, BLW will so notify

CALTRANS and submit (for CALTRANS' approval) a schedule for completion of the corrective action work. If BLW does not use its best efforts to proceed to effectuate that corrective action work within the agreed time, or if BLW and CALTRANS fail to reach such an agreement, CALTRANS, after written notice to BLW, will have the right to perform or have performed by third parties the necessary remedy, and the costs thereof will be borne by BLW. BLW will be responsible for the inspection and testing of the warranty work. If CALTRANS determines that emergency warranty repairs are necessary for public safety, CALTRANS may perform the corrective work. Any such emergency warranty repairs will be authorized by CALTRANS' Contract Manager, or his/her representative. Before making the emergency repairs, CALTRANS will document the basis for the emergency action, and will preserve evidence, such as photographs or videotapes, of the defective condition. Emergency repairs will be coordinated with BLW through the access and communication protocols to be developed between the parties under the BLW SYSTEM. All costs associated with the emergency warranty repairs that are covered by the warranty work will be borne by BLW.

10.10 All costs of correcting such rejected work, including additional testing and inspections, will be deemed included in the cost of CONSTRUCTION MANAGEMENT. BLW will reimburse CALTRANS and pay CALTRANS' expenses made necessary thereby within ten (10) days after BLW's receipt of an invoice and supporting documentation. BLW will be responsible for obtaining any required governmental approvals or other consents in connection with the warranty work.

10.11 The warranties will apply to all work redone, repaired, corrected, or replaced pursuant to the terms of the AGREEMENT. The warranties as to each redone, repaired, corrected, or replaced element of the work will extend beyond the original warranty period if necessary to provide at least a one-year warranty period following acceptance thereof by CALTRANS.

10.12 BLW will obtain from all its contractors appropriate representations, warranties, guarantees, and obligations with respect to design, materials, workmanship, equipment, tools, and supplies furnished by such contractors, which will extend not only to BLW but also to CALTRANS and any third parties for whom BLW WORK is being performed. All representations, warranties, guarantees, and obligations of contractors (a) will be written as to survive all CALTRANS QMA, and (b) will provide that upon any termination of the AGREEMENT prior to the expiration of such

representations, warranties, guarantees and obligations they will automatically be for the benefit of and enforceable by CALTRANS. To the extent that any Contractor warranty or guaranty is voided after termination of the AGREEMENT by reason of BLW's negligence or failure to comply with the requirements of the AGREEMENT, BLW will be responsible for correcting any defects in BLW WORK performed by such contractor which would otherwise have been covered by such warranty.

10.13 The contractor warranties are in addition to all rights and remedies available under the AGREEMENT or applicable federal and state law and will not limit BLW's liability or responsibility imposed by the AGREEMENT or applicable federal and state law with respect to BLW WORK, including liability for design defects, construction defects, strict liability, breach, negligence, willful misconduct, or fraud.

Section 11 Right of Way

11.1 BLW will perform the "Right of Way Requirements Determination" for each PROJECT COMPONENT.

Section 12 Schedule

12.1 BLW will manage the schedule to ensure the prior or concurrent construction of the PROJECT with the BLW SYSTEM, to ensure the timely use of committed funds, and to ensure compliance with any environmental permits, right-of-way agreements, construction contracts, and any other commitments. BLW will communicate schedule risks or changes as soon as they are identified and will actively manage and mitigate schedule risks.

Section 13 Insurance

13.1 Required Insurance

Prior to commencing physical construction of the PROJECT, BLW will procure or cause to be procured and maintained throughout construction the following insurance coverage:

13.1.1 Liability Insurance. Commercial General Liability (CGL) with a limit not less than \$100,000,000 each occurrence, \$100,000,000 products and completed operations aggregate, and a general aggregate limit of not less than \$100,000,000 providing coverage for bodily injury, property damage, and personal injury through any combination of primary and excess or umbrella liability insurance policies with one reinstatement general aggregate limit for the period of the policy term. Such policies must be project-specific with dedicated limits to this to the PROJECT. The CGL insurance must be written on an ISO occurrence form CG 00 01 04 13 or substitute forms providing equivalent coverage. All excess or umbrella policies shall be "follow form" and afford no less coverage than the primary policy. Such CGL shall cover the INDEMNIFIED PARTIES (as defined in Article 2, Section 3.1) as additional insureds using ISO Additional Insured Endorsement CG 20 26 (or 20 10 accompanied by 20 37 or equivalent forms providing coverage to the additional insured for completed operation losses). Coverage shall be provided to the INDEMNIFIED PARTIES for liability and any damage to property and injury or death of persons proximately caused by reason of the uses authorized by this AGREEMENT and the associated ENCROACHMENT PERMITS, unless caused by an INDEMNIFIED PARTY's sole or active negligence or willful misconduct.

The policy or policies shall be endorsed to remove exclusions pertaining to any railroads. There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability assumed under an insured contract. Completed operations coverage shall extend for as long as there is any exposure to liability under a statute of repose or any other applicable statute of limitations. If completed operations coverage through the end of statutory exposure is not commercially available, completed operations coverage shall extend for at least 10 years from the completion date of the PROJECT. All excess or umbrella policies shall contain a drop-down clause in the event of exhaustion of primary limits and provide coverage for primary CGL.

13.1.2 Commercial Automobile Insurance. During all phases of the PROJECT, BLW shall provide evidence of commercial business auto coverage written on ISO form CA 00 01 10 01 (or substitute form providing equivalent liability coverage) with a limit not less than \$1,000,000 for each accident. Such insurance shall cover liability arising out of any auto (including owned, hired,

and non-owned autos). The policy must contain an endorsement for coverage to operations in connection with a railroad and an endorsement to cover liabilities arising out of the Motor Carrier Act – Hazardous materials clean up (MCS-90) with a sublimit of no less than \$1,000,000.

During all phases of the PROJECT, BLW shall require its general contractor to provide evidence of commercial business auto coverage written on ISO form CA 00 01 10 01 (or substitute form providing equivalent liability coverage) with a limit not less than \$10,000,000 for each accident. Such insurance shall cover liability arising out of any auto (including owned, hired, and non-owned autos) and may be satisfied by a combination of primary and excess and/or umbrella policies. The policy(ies) must contain an endorsement for coverage to operations in connection with a railroad and an endorsement to cover liabilities arising out of the Motor Carrier Act – Hazardous materials clean up (MCS-90) with a sublimit of no less than \$5,000,000.

All excess or umbrella policies shall contain a drop-down clause in the event of exhaustion of primary limits and provide coverage for primary auto liability.

13.1.3 Workers' Compensation and Employers Liability Insurance. During all phases of the PROJECT, BLW shall provide evidence of Workers' Compensation insurance as required under California statute including coverage for Employer's Liability with limits of at least \$1,000,000 each accident, \$1,000,000 each employee by disease, and a policy limit of \$1,000,000 by disease. The excess liability policy must include employer's liability coverage limits to at least \$25,000,000.

The workers' compensation policies shall provide the following:

- a. A waiver of subrogation in favor of CALTRANS and the INDEMNIFIED PARTIES;
- b. A provision extending coverage to all state's operations;
- c. A voluntary compensation endorsement;
- d. An alternative employer endorsement, if applicable to BLW's operations;
- e. Coverage for liability under the United States Longshore and Harbor Workers' Compensation Act on an "if any" basis or as otherwise appropriate;

- f. Coverage for liability under Title 46 of the U.S.C. § 688 ("Jones Act") on an "if any" basis or as otherwise appropriate; and
- g. An endorsement extending the policy to cover the liability of the insureds under the Federal Employer's Liability Act on an "if any" basis or as otherwise appropriate.

13.1.4 Professional Liability Insurance. During all phases of the PROJECT, BLW will provide evidence of professional liability insurance, including prior acts coverage sufficient to cover all claims arising out of any professional services, including without limitation engineering, architectural, or land surveying work required in constructing the PROJECT on the PROPERTY, procured, and maintained by those third parties performing such work for or on behalf of BLW. For the lead design contractor for the PROJECT in privity with BLW, the coverage shall not be less than \$5,000,000 per claim and in the aggregate. For environmental assessments, land surveying work and any other site work, the coverage shall not be less than \$2,000,000 per claim and in the aggregate. For architectural, geotechnical engineers, and electrical engineers, the coverage shall not be less than \$2,000,000 per claim and in the aggregate. For structural engineers and civil engineers relating to the PROJECT, the coverage shall not be less than \$2,000,000 per claim and in the aggregate. BLW will also require any member of its design-build team, any subconsultant, or any subcontractor performing professional design services for any portion of the PROJECT, to obtain and maintain professional liability insurance providing the same coverage, with limits of at least \$1,000,000 per claim and in the aggregate.

No self-insured retention for BLW or any lead design entity shall exceed \$1,000,000 without prior written approval from CALTRANS, in its good faith discretion. Coverage shall apply specifically to professional activities performed or contracted by BLW in support of the PROJECT. The policy(ies) shall have a retroactive date consistent with the inception of the first date of design or project or construction management activities, and no later than the date on which any contract or subcontract was issued.

BLW agrees to maintain or to require its design professionals, subconsultants, or design-build subcontractors to maintain, as appropriate, this required coverage for a period of no less than three years after final acceptance or to

purchase an extended reporting period for no less than three years after final acceptance of the PROJECT. If the contractor is working with a separate lead design entity, contractor shall require the lead design entity to agree to maintain this coverage for a period of no less than three years after final acceptance of the PROJECT or to purchase an extended reporting period for no less than three years after the commencement of revenue service.

13.1.5 Contractor's Pollution Liability. BLW shall procure or cause to be procured contractor's pollution liability (CPL) coverage throughout the period of construction. Coverage should be provided by a stand-alone policy with PROJECT dedicated limits of no less than \$10,000,000 per occurrence and \$10,000,000 in the aggregate per policy period dedicated to this PROJECT. Coverage must be written on an occurrence basis and extended for a minimum 10-year period with a separate limit available exclusively to the PROJECT.

The CPL policy shall include coverage for investigation, removal, and remediation costs including monitoring or disposal of contaminated soil, surface water, groundwater to the extent required by environmental laws caused by pollution conditions resulting from or exacerbated by covered operations; third-party bodily injury and property damage, provided that the third-party property damage liability coverage includes loss of use of damaged property or of property that has not been physically injured or destroyed, resulting from pollution conditions caused by or from conditions exacerbated by covered operations. The policy shall have no exclusions or limitations for loss occurring over water including but not limited to a navigable waterway or for lead or asbestos.

Coverage as required in this Section shall apply to sudden and non-sudden pollution conditions resulting from the escape or release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, or gases, waste materials, or other irritants, contaminants, or pollutants. The CPL policy shall also provide coverage for losses due to loading, unloading or transportation and liability imposed by off-Site disposal of materials at a third-party disposal site including testing, monitoring, measuring operations or laboratory analysis and remediation.

If the scope of work includes the disposal of any hazardous or non-hazardous materials from the job site, BLW must furnish CALTRANS and the State of California evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of \$5,000,000 per loss and an annual aggregate of \$5,000,000.

13.1.6 Railroad Protective Liability. BLW shall provide, or cause to be maintained, any coverage as may be required by any railroad as a condition of the railroad's consent for entry onto railroad facilities or property. Such policy shall be effective during the period any construction is being performed within fifty (50) feet of any railroad right of way. Coverage shall be written on Insurance Services Office occurrence Form CG 00 35 (or substitute form providing equivalent coverage) on behalf of any railroad as a Named Insured, with a limit specified by any railroad.

13.1.7 Aircraft Liability. If applicable, BLW shall procure, or cause to be procured and maintained, aircraft liability insurance with a limit of not less than \$10,000,000 per occurrence in all cases where any aircraft including use of drones is used on the PROJECT that is owned, leased, or chartered by any Contractor-Related Entity or its subcontractors of any tier, protecting against claims for damages resulting from such use. Any aircraft intended for use in performance of the work, the aircraft crew, flight path and altitude, including landing of any aircraft on the PROJECT or on any property owned, rented, or leased by CALTRANS or the INDEMNIFIED PARTIES shall be subject to review and written acceptance by CALTRANS prior to occurrence of any such usage. If any aircraft are leased or chartered with crew and/or pilot, evidence of non-owned aircraft liability insurance will be acceptable in lieu of the coverage listed above but must be provided prior to use of the aircraft.

13.1.8 Builder's Risk Insurance. BLW shall, upon commencement of construction and with approval of CALTRANS, obtain and maintain a policy of builder's risk insurance for the PROJECT. Coverage shall be written on an "all risk" basis and provided through a stand-alone policy dedicated solely to the PROJECT. The policy shall cover all property, roads, buildings, bridge structures, other structures, fixtures, materials, supplies, foundations, pilings, machinery and equipment (excluding contractor's equipment) that are part

of or related to the portions or elements of the PROJECT, and the works of improvement, including permanent and temporary works and on-site materials, and including goods intended for incorporation into the works located at the PROJECT right of way, in storage, or in the course of transit to the PROJECT right of way and all improvements that are within the PROJECT right of way.

The builder's risk policy must include coverage for:

- a. Any ensuing loss from faulty workmanship or nonconforming work, including L.E.G. 3 wording;
- b. Machinery accidents and operational testing involving equipment covered by the policy;
- c. Removal of debris, with a sublimit of twenty-five percent (25%) of the loss and insure the buildings, structures, machinery, equipment, materials, facilities, fixtures and all other properties constituting a part of the Project;
- d. Transit, including ocean marine coverage (unless insured by the supplier or through a separate marine cargo policy), with sub limits sufficient to insure the full replacement value of any key equipment item;
- e. Replacement value of any property or equipment stored either on or off the site;
- f. Coverage limits sufficient to insure for the following perils subject to applicable sub-limits for these perils based on the probable maximum loss of the insured property:
 - Collapse;
 - Terrorism;
 - Earthquake;
 - Flood;
- g. Plans, blueprints, and specifications; and
- h. Demolition and increased cost of construction as required by law or ordinance subject to applicable sub limits.

There shall be no coinsurance penalty provision in any such policy. All deductibles or self- insured retentions shall be the sole responsibility of BLW. The policy shall provide a "severability of interests provision," or

"multiple insured's clause" or similar wording that the policy shall apply to each insured as if a separate policy had been issued to each insured except as to limits.

BLW shall also require the general contractor and its subcontractors to procure and maintain coverage for tools and equipment owned, leased, or used by the general contractor or subcontractors in the performance of the scope.

13.2 General Insurance Provisions

13.2.1 Self Insurance.

13.2.1.1 The policy or policies under which coverage required by this AGREEMENT is provided may include deductibles or self-insured retentions not in cumulative excess of ten million dollars (\$10,000,000) on the condition that:

13.2.1.1.1 Each insurance policy expressly provides that the obligations of the policy issuer to CALTRANS as an additional insured will not be diminished in any way by BLW's failure to pay its deductible or self-insured retention obligation for any reason;

13.2.1.1.2 BLW provides a declaration under penalty of perjury by a CPA certifying the accountant has applied GAAP guidelines confirming BLW has enough funds and resources to cover any self-insured retention amount.

13.2.1.1.3 BLW promptly pays any and all amounts due under such deductible or self-insured retention in lieu of insurance proceeds that would have been payable if the insurance policies had not included a deductible or self-insured retention amount.

13.2.1.2 As used in this AGREEMENT, "self-insurance" means that BLW is itself acting as if it were the insurance company providing the insurance required under the provisions of this AGREEMENT.

13.2.2 Evidence of Insurance. In accordance with the insurance requirements above, BLW will furnish evidence of insurance reasonably acceptable to CALTRANS before the EFFECTIVE DATE, before commencing physical construction of the PROJECT within the PROPERTY, and before the beginning of operations. BLW will provide CALTRANS with evidence of renewal or replacement insurance no later than thirty (30) days after the expiration or termination of such insurance. BLW must submit full copies of the commercial general liability policy, excess/umbrella liability policy, builder's risk policy, and the project-specific professional liability policy or binders with full specimen copies of the forms for each policy until such time as full copies of the policies are available. This requirement applies prior to BLW starting work on the PROJECT including all subsequent renewal policies. Certificates of insurance are required for all other lines of insurance. If, through no fault of BLW, any of the coverage required becomes unavailable, BLW will provide good faith alternative insurance packages and programs, subject to prior approval by CALTRANS, with the goal of reaching agreement on a package providing coverage equivalent to that specified herein.

13.2.3 Eligible Insurers. All insurance policies required to be carried by BLW as provided in this Section will be issued by insurance companies authorized by the Department of Insurance of the State of California or an eligible surplus lines insurer, with a Best's Rating of "A-" or better and a Financial Size Category of "VII" or better according to the most recent edition of "Best's Key Rating Guide" for insurance companies. BLW will furnish to CALTRANS, not less than ten (10) days before the date the insurance is first required to be carried by BLW, and thereafter before the expiration of each policy, certificates of insurance, using the appropriate ACORD form of certificate or its equivalent, evidencing the coverages required under this Section, with a copy of each policy, if requested by CALTRANS. Such certificates will provide that should any policies described therein be cancelled before the expiration date thereof, notice will be delivered to the certificate holder by the insurer in accordance with the policy provisions regarding same. Further, BLW agrees that the insurance coverage required hereunder will not be terminated or modified in any material way without thirty (30) days advance written notice from BLW to CALTRANS.

13.2.4 Cure. In the event BLW fails to procure insurance required under this Section or fails to maintain the same in full force and effect continuously during the term of this AGREEMENT and any renewal thereof or fail to meet its obligations with respect to any deductible or self-insured retention amount under this AGREEMENT, subject to the provisions above, CALTRANS will be entitled, after thirty (30) days prior written notice to BLW of BLW's default hereunder and BLW's failure to cure such default within said thirty (30) days, 10 days for non-payment, to require BLW to immediately discontinue all construction activities related to the PROJECT until BLW has provided CALTRANS reasonably satisfactory evidence that the required insurance has been obtained and the other obligations of BLW under this Section have been met. No cessation of construction or operations required by CALTRANS under this Section will relieve BLW or CALTRANS of any of their other obligations under this AGREEMENT.

13.2.5 CALTRANS Invitees. Should CALTRANS grant access to third parties to perform work over, near, or adjacent to the PROJECT, in accordance with its standard temporary access permit requirements, CALTRANS will require the third party to provide evidence of Commercial General Liability (CGL) with a minimum limit not less than \$5,000,000 each occurrence and a general aggregate limit of not less than \$10,000,000 providing coverage for bodily injury, property damage, and personal injury through any combination of primary and excess or umbrella liability insurance policies with limits restating annually. The CGL insurance must be written on an ISO occurrence form CCG 00 01 04 13 or substitute forms providing equivalent coverage. All excess or umbrella policies shall be "follow form" and afford no less coverage than the primary policy. Such CGL shall cover CALTRANS, the State of California, and BLW and their officers, employees, parents, subsidiaries, affiliates, and volunteers and any other INDEMNIFIED PARTIES as defined in CALTRANS' temporary access permit as additional insureds using ISO Additional Insured Endorsement CG 20 10 and provide coverage for the CALTRANS and BLW's negligence whether sole or partial, active or passive and will not be limited to any indemnity agreement applicable to the third party's work under any temporary access permit issued by CALTRANS. BLW has the right to periodically review the adequacy of the insurance coverage required by this Section. BLW may require a change or increase in the insurance coverage if the coverage requested by CALTRANS of any third party so long as the

coverage required by BLW is customary and commonly required for work of similar in type, size, and location. CALTRANS shall also require the third party to provide evidence of Commercial Auto Liability and Workers' Compensation coverage in limits consistent with what is required in CALTRANS temporary access permit. If any of the work by third parties is performed within fifty (50) feet of the PROJECT, CALTRANS will also require the third party to obtain and maintain a railroad protective liability policy to protect BLW in a minimum amount of Two Million Dollars (\$2,000,000) per occurrence and Six Million Dollars (\$6,000,000) aggregate. CALTRANS will require evidence of these coverages to be provided to BLW no less than fifteen (15) days prior to the commencement of the work.

13.2.6 Waiver. To the extent permitted by applicable law, CALTRANS and BLW hereby waive all rights against each other, and against the other's consultants, contractors, subcontractors, sub-subcontractors, agents, and employees, for damages covered by insurance obtained in connection with the PROJECT. The insurance policies obtained by BLW related to the PROJECT from and after the EFFECTIVE DATE will provide such waivers of subrogation by endorsement or otherwise.

13.2.7 Primary Insurance. BLW's insurance shall be primary and non-contributory with any insurance maintained by CALTRANS and shall include cross liability or severability of interest, if applicable.

Section 14 Deficiencies or NON-CONFORMING WORK Report

14.1 CALTRANS will inform BLW of any deficiencies or discrepancies discovered as a result of CALTRANS QMA by completing a response to a written noncompliance or nonconformance report from BLW. Each response to noncompliance or nonconformance report will include an explanation of the resolution desired by CALTRANS. If CALTRANS concurs, the noncompliance or nonconformance report will be closed. If the parties do not agree on the proposed resolution, the matter will be referred to the dispute resolution process under Article 4, Section 5. Nonconformance notices will be logged by BLW and released from the log once corrected, as part of the written documentation process established in BLW's QMPs as the process for BLW to identify, document, and respond to NON-CONFORMING WORK.

14.2 Should CALTRANS and BLW determine that work within CALTRANS right-of-way: (i) jeopardizes the structural integrity of any new or existing SHS facility, (ii) poses an imminent danger, (iii) is not in conformance with stormwater permit requirements and aerial deposited lead variance, or (iv) construction of false-work or trenching and shoring for the PROJECT is being constructed without approved plans or is not in conformance with the approved FINAL DESIGN, BLW will stop such NON-CONFORMING WORK. Work will resume only when CALTRANS and BLW agree on proper procedures to be followed and agree on remedial work to be completed.

ARTICLE 2 – ADDITIONAL PROVISIONS

Section 1 Close Out of Project

1.1 Upon completion of construction, the parties will execute a CLOSURE STATEMENT to terminate this AGREEMENT, upon which all ownership, control, and maintenance responsibilities for the PROJECT improvements will shift to CALTRANS; *provided*, that all terms of the AGREEMENT that are expressly or are by reasonable implication intended to survive termination will survive.

1.2 Subject to and without limiting the terms of Article I, Section 9.5, if BLW fails to complete the PROJECT for any reason other than (i) a breach by CALTRANS or (ii) insufficient funding for CONSTRUCTION CAPITAL costs to complete the PROJECT, at CALTRANS' request, BLW will, at BLW's expense, return the SHS right-of-way to its original condition or to a safe and operable condition acceptable to CALTRANS. If BLW fails to do so, CALTRANS reserves the right to finish the work or place the PROJECT in a safe and operable condition. To the extent consistent with the other provisions of this Section, CALTRANS will bill BLW for all expenses incurred and BLW agrees to pay said bill within forty-five (45) days of receipt.

1.3 Subject to and without limiting the terms of Article I, Section 9.5, if BLW fails to complete the PROJECT for any reason, other than (i) a breach by CALTRANS or (ii) insufficient funding for CONSTRUCTION CAPITAL costs to complete the PROJECT, BLW will reimburse CALTRANS the full amount of CALTRANS' costs to complete the PROJECT.

1.4 BLW will retain all PROJECT related records for three (3) years after the CLOSURE STATEMENT.

Section 2 Hazardous Materials

2.1 Any party that discovers HAZARDOUS MATERIALS will immediately notify the other party to this AGREEMENT.

2.2 BLW is responsible for management and remediation of HAZARDOUS MATERIALS necessitated by the PROJECT construction and will do so in compliance with all applicable federal and state laws relating to HAZARDOUS MATERIALS, and any rules and regulations promulgated thereunder, including but not limited to, ensuring that the transportation, storage, handling, and disposal of such HAZARDOUS MATERIALS are conducted in full compliance with applicable environmental laws. Any such management activity for HAZARDOUS MATERIALS is a PROJECT CONSTRUCTION CAPITAL cost.

2.3 CALTRANS is solely responsible as the generator for HAZARDOUS MATERIALS management and remediation necessitated by the PROJECT construction and will coordinate its manifest requirements and designation of disposal facility with BLW in accordance with CALTRANS STANDARDS, including but not limited to Standard Specification 14-11.07.

2.3.1 Notwithstanding the foregoing, BLW is solely responsible as the generator for any HAZARDOUS MATERIALS that may require managerial, custodial, or remedial action if imported onto the construction site through BLW's construction activities and will accept its manifest requirements and designation of disposal facility in accordance with CALTRANS STANDARDS, including but not limited to Standard Specification 14-11.06. Any such management of BLW generated HAZARDOUS WASTE will be a CONSTRUCTION MANAGEMENT COST.

Section 3 Indemnity by BLW

3.1 Third-Party Claims. BLW will indemnify, defend, and hold harmless CALTRANS, CDFW, CalSTA, the State of California, and their officers, employees, agents, and volunteers (i.e., as may be the case under the CALTRANS Adopt-a-Highway program or participants in alternative punishment probation programs)(collectively the "INDEMNIFIED PARTIES") from any and all claims, suits, judgments, fines, penalties,

reasonable attorney's fees (including appellate and regulatory attorney's fees), actions of every nature, kind, and description brought forth under, but not limited to, tortious, contractual, equitable, environmental, inverse condemnation, or other theories and assertions of liability and any damage to property and injury or death of persons (collectively "CLAIMS") proximately caused by reason of the acts or omissions of BLW in relation to (i) BLW's performance under this AGREEMENT, (ii) BLW'S activities that are authorized or required under this AGREEMENT, or (iii) the design, construction, adequacy, or performance of the PROJECT except, in each case, to the extent caused by an INDEMNIFIED PARTY's sole or active negligence or willful misconduct.

3.2 Damage to CALTRANS Highway Facilities. BLW will indemnify, defend, and hold harmless CALTRANS from any actual losses or damages of any kind or nature to I-15 or any other CALTRANS owned facility or property, to the extent proximately caused by any act, error, omission, or negligence by or through BLW or its employees, agents, contractors, or subcontractors in connection with BLW's acts or omissions of BLW in relation to (i) BLW's performance under this AGREEMENT, (ii) BLW'S activities that are authorized or required under this AGREEMENT, or (iii) the design, construction, adequacy, or performance of the PROJECT, except, in each case, to the extent caused by CALTRANS' sole or active negligence or willful misconduct.

3.3 Survival of Indemnification. The provisions of this Article 2, Section 3 will survive the termination or expiration of this AGREEMENT. In no event will this Article or any other provision of this AGREEMENT be deemed to limit any liability BLW may have to any INDEMNIFIED PARTY by statute or under common law.

Section 4 Force Majeure Events

4.1 Notwithstanding anything to the contrary contained in this AGREEMENT, should any fire or other casualty, act of nature, earthquake, flood, hurricane, lightning, tornado, epidemic, landslide, war, terrorism, riot, civil commotion, government shutdown, general unavailability of materials, strike, slowdown, labor dispute, governmental laws or regulations, or other occurrence beyond BLW's or CALTRANS' control prevent performance of this AGREEMENT in accordance with its provisions, provided that such event does not arise by reason of the negligence or misconduct of the performing party, performance of this AGREEMENT by the

affected party will be suspended or excused to the extent and for a period commensurate with such occurrence.

Section 5 Prevailing Wage

5.1 BLW acknowledges that projects funded in whole or in part with the grant funds and programmed funds applicable to this PROJECT may constitute public works projects and require payment of prevailing wages under the California Labor Code (see Section 1720 et seq.) BLW acknowledges that it is responsible for complying with prevailing wage laws in relation to the PROJECT and that CALTRANS will not provide advice about Labor Code compliance.

5.2 Nothing in this AGREEMENT is meant to be or will be interpreted to supersede the application of collective bargaining agreements negotiated under the federal Railway Labor Act to determine the wages to be paid to BLW's employees.

Section 6 Protected Resources

6.1 If either party discovers unanticipated cultural, archaeological, paleontological, or other protected resources during construction, all work in that area will stop and that party will notify the other party within twenty-four (24) hours of discovery. Work may only resume after a qualified professional has evaluated the nature and significance of the discovery and CALTRANS approves a plan for its removal or protection.

Section 7 Disclosures

7.1 The parties will hold all administrative drafts and administrative final reports, studies, materials, and documentation relied upon, produced, created, or utilized for BLW WORK in confidence to the extent permitted by law and where applicable, the provisions of California Government Code, Section 7921.505 (c) (5) will protect the confidentiality of such documents in the event that said documents are shared between the parties.

7.2 The parties will not distribute, release, or share said documents with anyone other than employees, agents, and consultants who require access to complete the PROJECT without the written consent of the party authorized to release them, unless required or authorized to do so by law.

7.3 If CALTRANS receives a public records request pertaining to the PROJECT, CALTRANS will notify BLW within five (5) working days of receipt and make BLW aware of any disclosed public records.

Section 8 Claims

8.1 BLW may accept, reject, compromise, settle, or litigate claims of any consultants or contractors hired to complete BLW WORK without concurrence from CALTRANS.

Section 9 Interruption of Work

9.1 If BLW WORK stops for any reason, BLW will place the PROJECT right-of-way in a safe and operable condition acceptable to CALTRANS.

9.2 If construction stops for any reason, each party will continue with environmental commitments included in the environmental documentation, permits, agreements, or approvals that are in effect at the time that construction stops, and will keep the PROJECT in environmental compliance until construction resumes.

Section 10 Penalties, Judgements, and Settlement

10.1 The cost of any awards, judgements, fines, interest, penalties, attorney's fees, or settlements generated by BLW WORK are considered CONSTRUCTION CAPITAL costs.

10.2 The cost of legal challenges to the environmental process or documentation are considered CONSTRUCTION CAPITAL costs.

10.3 Fines, interest, or penalties levied against CALTRANS will be paid by BLW when BLW's action or lack of action caused the levy.

Section 11 Project Files

11.1 BLW will furnish CALTRANS with the Project History Files related to the PROJECT facilities on the State Highway System prior to execution of the CLOSURE STATEMENT. BLW will ensure that the Project History File is prepared and submitted in compliance with the Project Development Procedures Manual, Chapter 7 and the CALTRANS Construction Manual. All material will be submitted in PDF format or in an agreed electronic filing system.

ARTICLE 3 – FUNDING OF CAPITAL CONSTRUCTION COSTS

Section 1 Payment

- 1.1 CALTRANS will fund and pay to BLW the CONSTRUCTION CAPITAL costs, in accord with Exhibit B (Budget Detail and Payment Provisions for Capital Costs of Construction).
- 1.2 BLW will be reimbursed for direct costs for CONSTRUCTION CAPITAL, which expressly do not include BLW's cost for CONSTRUCTION MANAGEMENT (see, Article 1, Section 2.4).

ARTICLE 4 – GENERAL CONDITIONS

Section 1 Venue

1.1 Except on subjects preempted by federal law, this AGREEMENT will be governed by and construed in accordance with the laws of the State of California. Nothing herein is meant to be or will be interpreted to be a waiver of principles of legal preemption or preclusion that may apply to BLW because of its status as a common carrier regulated by the federal government. Venue for any lawsuit between the parties in relation to this AGREEMENT will be exclusively in the Superior Court of San Bernardino County or the United States District Court, Central District of California.

Section 2 Exemptions

2.1 All CALTRANS obligations and commitments under this AGREEMENT are subject to the appropriation of resources by the Legislature, the State Budget Act authority, programming, and allocation of funds by the CTC. Notwithstanding the previous sentence or any other provision of this agreement, BLW is in no circumstance responsible for CONSTRUCTION CAPITAL.

Section 3 Non-Parties

3.1 The parties do not intend this AGREEMENT to create a third-party beneficiary or define duties, obligations, or rights for entities not signatory to this AGREEMENT. The parties do not intend this AGREEMENT to affect their legal liability by imposing any standard of care for fulfilling the work different from the standards imposed by law.

3.2 Neither party will assign or attempt to assign obligations to entities not signatory to this AGREEMENT without the written consent of the other party.

Section 4 Defaults

4.1 If either party defaults in its performance, the non-defaulting party will request in writing that the default be remedied within thirty (30) calendar days. If the defaulting party fails to do so, the non-defaulting party may initiate dispute resolution.

Section 5 Dispute Resolution

5.1 The parties agree to work in good faith to resolve any dispute that may arise under this AGREEMENT through direct discussions.

5.2 If the parties are unable to resolve a dispute within ten (10) days of written notice of a dispute, BLW and CALTRANS will, at the written request of either party, require that the matter be reviewed by a senior-level executive of each party (in the case of BLW, by a Senior Vice President or higher, and in the case of CALTRANS, by the District Director or higher.)

5.3 If senior officers are unable to resolve the matter within ten (10) business days, then BLW and CALTRANS will, at the written request of either party, attempt to mediate their dispute for a period of thirty (30) days using a third-party mediator who is neutral and independent of the parties, such mediator to be jointly selected by BLW and CALTRANS within seven (7) business days after the end of the 10-day period of discussions between senior-level officers. If the parties cannot agree on the mediator within such time period, then within five (5) days thereafter, each party will select an independent neutral, and those two neutrals will within five (5) days select the mediator. Mediation will be conducted in San Bernardino County, California.

5.4 No information exchanged in mediation will be discoverable or admissible in any litigation involving the parties, consistent with California Evidence Code Sections 1119 et seq. and 1121. Neither party will be bound by the result of the mediation process described in this Section, but participation in such mediation process will be a condition for either of the parties to file a lawsuit or to initiate a formal administrative proceeding related to this AGREEMENT or the PROJECT. All statutes of limitation related to claims or defenses that can be asserted by either party in relation to the dispute will be tolled during the formal dispute-resolution process described in this Section.

5.5 Each party will bear its own costs, including attorney fees, that it incurs in relation to the dispute-resolution process described in this Section. In the event the parties use a mediator, they will share equally in the costs of the mediator's services.

Section 6 Waiver

6.1 Any waiver, modification, consent, or acquiescence with respect to any provision of this AGREEMENT must be set forth in writing and duly executed by or on behalf of the party to be bound by it. No waiver by either party of any breach will be deemed a waiver of any other or subsequent breach.

6.2 A waiver of a party's performance of one provision under this AGREEMENT will not constitute a waiver of any other provision.

Section 7 Entire Agreement; Modifications

7.1 No alteration or variation of the terms of this AGREEMENT will be valid unless made in writing and signed by the parties hereto, and no oral understanding or agreement not incorporated herein will be binding on either of the parties.

7.2 Except to the extent as may be expressly provided to the contrary, this AGREEMENT does not modify the terms of any other agreement between the parties.

7.3 In the event of a conflict between the terms of this AGREEMENT and the MOU, the terms of this AGREEMENT will prevail.

Section 8 Severability

8.1 If any provision of this AGREEMENT, or the application of a provision to any person, place, or circumstance, is held by a court of competent jurisdiction to be invalid, void, or otherwise unenforceable, such provision will be enforced to the maximum extent possible so as to effect the intent of the parties; or, if incapable of such enforcement or unable to achieve the intent of the parties, will be deemed to be deleted, and the remainder of this agreement and such provisions as applied to other persons, places, and circumstances will remain in full force and effect. In such an event, the parties agree to negotiate an amendment to replace or modify any invalid or illegal or unenforceable provision and related provisions with valid, legal, and enforceable provisions that most closely and reasonably approximate the intent and economic effect of the invalid, illegal, or unenforceable provision.

Section 9 Interpretation

9.1 The section and paragraph headings in this AGREEMENT are for convenience only and will not be used for any purpose in the interpretation of this AGREEMENT. When the context requires, the plural will include the singular and the singular the plural. References to agreements or contracts are to such agreement or contract as may be amended, restated, or otherwise modified from time to time. The words "include," "includes," and "including" are used without limitation and are deemed to be followed by the phrase "without limitation." Notwithstanding specific

references to "good faith," the duty of good faith and fair dealing applies generally with respect to this AGREEMENT, except where the context requires otherwise.

9.2 No terms of this AGREEMENT will be interpreted for or against a party on the basis that the party or its counsel assisted with the drafting of the language in question. The parties hereby waive the provisions of California Civil Code Section 1654 to the extent that it is inconsistent with the preceding sentence.

Section 10 Relationship of the Parties

10.1 Each party is and will at all times be and remain independent from the other party and will not be deemed an agent, fiduciary, partner, joint-venturer, employee, or employer of the other party. Nothing contained herein will have the effect of creating a trust, joint venture, partnership, or employment relationship between the parties. Neither of the parties has any right or power to obligate or bind the other party in any manner whatsoever.

Section 11 Breach, Cure, and Termination

11.1 A party will be in breach of this AGREEMENT for any failure to comply with the material provisions of this AGREEMENT or failure in the performance or observance of any of the covenants or actions required by this AGREEMENT in any material respects beyond the cure period applicable thereto. The party alleged to be in breach will have a period of thirty (30) days following receipt of written notice from the other party within which to cure the alleged breach; provided, however, that if the alleged breach reasonably requires more than thirty (30) days to cure, the party in breach will have an additional reasonable period to cure the breach so long as the party commences to cure within such thirty (30) day period and thereafter diligently prosecutes such cure to completion. Either party may initiate use of the dispute resolution process described in Article 4, Section 5 to seek resolution of a disputed breach.

11.2 This AGREEMENT may be terminated under either of these circumstances:

11.2.1 If, after written notice of a breach, (a) the breaching party does not cure or commence cure of the breach within the time limits described in this

Section and (b) neither party initiates use of the dispute resolution process described in Article 4, Section 5; or

11.2.2 The parties follow the dispute resolution process described in Article 4, Section 5 for an alleged breach and do not resolve the dispute within the time limits for mediation provided in the dispute resolution process.

Under either grounds for termination described in this Section, the party not in breach must provide an additional thirty (30) days written notice of termination before termination becomes effective.

Section 12 Notices

12.1 Any communication, notice, or demand of any kind whatsoever which a party may be required or may desire to give to or serve upon the other party must be in writing and delivered by personal service (including express or courier service) or by registered or certified mail, postage prepaid, return receipt requested, or by a nationally recognized overnight delivery service, in each case addressed as follows:

CALTRANS California Department of Transportation
Attn: Meardey Tim, Project Director
District 8 – Program/Project Management
464 W. Fourth St., MS-1229
San Bernardino, CA 92401
Tele: (909) 383-6480

With a copy to:

California Department of Transportation,
Legal Division
Attn: Julie Del Rivo, Assistant Chief Counsel
100 S. Main Street, Suite 1300
Los Angeles, CA 90012
Tele: (213) 687-6000

BLW

DesertXpress Enterprises, LLC
Attn: Sarah Watterson, President
8329 W. Sunset Road, Suite 150
Las Vegas, Nevada 89113
Tele: (516) 659-8788

With a copy to:

David Pickett
Associate General Counsel
8329 W. Sunset Road, Suite 150
Las Vegas, Nevada 89113
Tele: (916) 705-4618

Without requiring an amendment to this AGREEMENT, either party may change its address for notice by written notice given to the other party in the manner provided in this Section. Any such communication, notice, or demand will be deemed to have been duly given or served on the date personally served, if by personal service; three (3) days after being placed in the U.S. Mail, if mailed; or one (1) day after being delivered to an overnight delivery service, if sent by overnight delivery.

Section 13 Authority and Binding Effect

13.1 Each individual executing this AGREEMENT affirms that he or she has the capacity set forth on the signature pages and has full power and authority to execute this AGREEMENT and, through his or her execution, bind the party on whose behalf he or she is executing the AGREEMENT.

Section 14 Counterparts

14.1 This AGREEMENT may be signed in counterparts, each of which will be deemed an original but all of which will together constitute one and the same instrument.

[Signature Page Follows]

The parties have executed this AGREEMENT as of the EFFECTIVE DATE.

DESERTXPRESS ENTERPRISES, LLC

DocuSigned by:

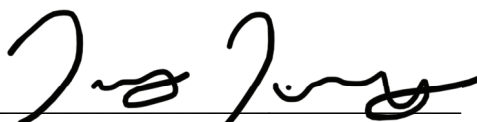
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Sarah Watterson
President
DesertXpress Enterprises, LLC

Approved as to Form:

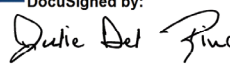
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By: 313B327C98534FB...
David Pickett
Associate General Counsel
DesertXpress Enterprises, LLC

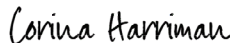
**CALIFORNIA DEPARTMENT OF
TRANSPORTATION**

By: 
Tony Tavares
Caltrans Director

Approved as to Form:

DocuSigned by:

By: 56AE39A9E25A44B...
Julie Del Rivo
Assistant Chief Counsel
Caltrans Legal Division

Verified as to Funds and Authority

DocuSigned by:

By: 9672E0F3EAF4132...
Corina Harriman
District Budget Manager, District 8

Reviewed as to Financial Terms and
Policies:

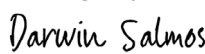
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By: 33CE937581884BE...
Darwin Salmos
Accounting Supervisor

EXHIBIT A
BUDGET SUMMARY FOR PROJECT

IMPLEMENTING PARTY		CALTRANS	BLW*	Totals
Source	Fund Type	CONSTRUCTION CAPITAL	DESIGN ENGINEERING /CONSTRUCTION MANAGEMENT	
State	CDFW (Grant)	\$20,000,000		\$20,000,000
Federal /State	CALTRANS (SHOPP)	\$71,583,000		\$71,583,000
BLW			\$33,000,000	\$33,000,000
	Totals	\$91,583,000	\$33,000,000	\$124,583,000

* Estimated cost includes actual and in-kind costs.

EXHIBIT B
BUDGET DETAIL AND PAYMENT PROVISIONS
FOR CAPITAL COSTS OF CONSTRUCTION

Budget Detail and Payment Provisions

1. Invoicing

A. For services satisfactorily rendered by BLW and approved by CALTRANS's Project Manager and upon receipt and approval of the invoices, CALTRANS agrees to reimburse BLW for actual allowable costs incurred as specified in the **Payment** section of this **EXHIBIT B**. Incomplete or disputed invoices will be returned to BLW, unpaid, for correction.

B. Invoices will include the Agreement Number and will be submitted not more frequently than monthly in arrears, to: D8 - Financial Office

2. Payment

A. Nothing herein contained will preclude advance payments pursuant to Article 1, Chapter 3, Division 3, Title 2 of the California Government Code.

B. BLW will submit to CALTRANS monthly invoices for the prior month's actual expenditures after execution of this AGREEMENT and forty-five (45) days after bid award by BLW.

C. CALTRANS will pay BLW within forty-five (45) calendar days of receipt of invoices.

D. BLW will be reimbursed for direct costs for CONSTRUCTION CAPITAL, which expressly do not include BLW'S cost for CONSTRUCTION MANAGEMENT (see, Article 1, Section 2.4).

3. Cost of CONSTRUCTION MANAGEMENT

A. Except as otherwise specifically set forth herein, all CONSTRUCTION MANAGEMENT COSTS will be borne by BLW as the sole funding party. BLW will

track and maintain auditable records of its CONSTRUCTION MANAGEMENT COSTS incurred for the PROJECT.

4. Cost of CONSTRUCTION CAPITAL

A. Except as otherwise specifically set forth herein, all CONSTRUCTION CAPITAL costs will be borne by CALTRANS as the sole funding party.

B. The cost to comply with and implement the commitments and mitigation set forth in the environmental documentation is a CONSTRUCTION CAPITAL cost.

C. The cost to ensure that the PROJECT remains in environmental compliance during BLM's WORK is a CONSTRUCTION CAPITAL cost.

D. The cost of any legal challenges to CEQA or NEPA environmental process or documentation is a CONSTRUCTION CAPITAL cost.

E. The cost to place PROJECT right-of-way in a safe and operable condition and meet all environmental commitments prior to completion of CONSTRUCTION WORK is a CONSTRUCTION CAPITAL cost.

F. Construction claims for BLW WORK are CONSTRUCTION CAPITAL costs.

G. After the parties agree that all CONSTRUCTION WORK is complete, BLW will submit a final accounting for all of its chargeable costs. Based on the final accounting, the parties will refund or invoice as necessary in order to satisfy the financial commitments of this AGREEMENT.

5. Cost Limitation

A. Subject to the other provisions of this AGREEMENT, it is understood and agreed that the total current programmed CONSTRUCTION CAPITAL cost identified in Article 1, Section 3.2 is an estimate, and that CALTRANS will pay for only those services actually rendered by BLW and as authorized by CALTRANS through approved funding allocations to the PROJECT.

6. Cost Principles

A. BLW agrees that the Contract Cost Principles and procedures in 48 CFR, Part 31, and Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, in 2 CFR, Part 200, will be used to determine the allowable individual items of cost for which it will seek reimbursement and will not apply to CONSTRUCTION MANAGEMENT.

B. Any costs for which payment has been made to BLW that are determined by subsequent audit to be unallowable under 48 CFR, Part 31, or 2 CFR, Part 200, are subject to repayment by BLW.

C. Any subcontract entered by BLW as a result of this AGREEMENT will contain all of the provisions of this clause.

7. Electronic Fund Transfer

CALTRANS will seek Electronic Funds Transfer (EFT) certification from BLW. If approved, CALTRANS will use EFT mechanisms and follow EFT procedures to pay all invoices issued by BLW.



State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
P.O. Box 944209
Sacramento, CA 94244-2090
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



Nature Based Solutions: Wildlife Corridors

I-15 Mojave Wildlife Overcrossings

Grant Agreement Number – Q2396066

GRANTOR: State of California, acting by and through
The California Department of Fish and Wildlife
P.O. Box 944209
Sacramento, CA 94244–2090

GRANTEE: State of California, acting by and through
The California Department of Transportation
The Rosa Parks Memorial Building,
464 W. 4th Street
San Bernardino, CA 92401

SECTION 1 – LEGAL BASIS OF AWARD

Pursuant to Statutes of 2022, Chapter 249, Section 79, Item 3600-007-0001 (AB 179), which amended the California Budget Act of 2022, Public Resources Code Section 6217.1, and Fish and Game Code Section 1501.5 (b), the California Department of Fish and Wildlife (Grantor or CDFW), is authorized to enter into this Grant Agreement (Agreement) and to make an award to the California Department of Transportation (Grantee), for the purposes set forth herein. Grantee accepts the grant on the terms and conditions of this Agreement. Accordingly, Grantor and Grantee (Parties) hereby agree as follows:

SECTION 2 – GRANT AWARD

- 2.01 Grant:** In accordance with the terms and conditions of this Agreement, including Section 5.05 – General Terms and Conditions, Grantor shall provide Grantee with a maximum of \$20,000,000 (Grant Funds) to financially support and assist Grantee's implementation of the I-15 Mojave Wildlife Crossings (Project).
- 2.02 Term:** The term of this agreement is April 1, 2024, or upon Grantor approval, whichever is later, through March 15, 2028.

SECTION 3 – ELIGIBLE USES OF GRANT

Only Grantee expenditures that are necessary to implement the Project, comply with applicable federal and State of California law, and made in accordance with Section 6 – Project Statement and Section 9 – Budget and Payment as set forth within this Agreement are eligible for reimbursement from the Grant Funds.

Q2396066

California Department of Transportation

SECTION 4 – GRANTEE’S REPRESENTATIONS AND WARRANTIES

Grantee represents and warrants to Grantor as follows:

- 4.01 Existence and Power:** Grantee is a public entity, validly existing, and in good standing under the laws of California. Grantee has full power and authority to transact the business in which it is engaged and full power, authority, and legal right to execute and deliver this Agreement and incur and perform its obligations hereunder.
- 4.02 Binding Obligation:** This Agreement has been duly authorized, executed and delivered on behalf of Grantee and constitutes the legal, valid, and binding obligation of Grantee, enforceable in accordance with the Agreement’s terms.

SECTION 5 – GRANTEE’S AGREEMENTS

- 5.01 Purpose:** This Agreement is entered into by the Parties for the purpose of providing financial support to Grantee to complete the Project, specifically the activities identified within Section 6 – Project Statement.
- 5.02 Project:** Grantee shall complete the Project as set forth in Section 6 - Project Statement.
- 5.03 General Terms and Conditions:** Public Entities General Grant Provisions (Exhibit 1.a) and Notice of Economic Sanctions (Exhibit 3) are attached hereto and made a part of this Agreement.
- 5.04 Amendments; Budget Revisions:** Grantee shall submit any request to amend any term of this Agreement in writing to the CDFW Grant Manager. Grantee must include an explanation of and justification for any such request. This Agreement may only be amended in accordance with Section 2 of Exhibit 1.a, except that the CDFW Grant Manager may approve via email proposed revisions to the Budget (as defined in Section 9.01) to shift budgeted funds between existing line items or categories when those proposed revisions meet all the following requirements:
- a. Are consistent with the Project as detailed in Section 6 - Project Statement;
 - b. Do not increase the total amount of Grant Funds;
 - c. Do not, in the aggregate, transfer more than 10% of the Grant Funds relative to the initial Budget in this Agreement or the Budget in an amendment to this Agreement executed in accordance with Section 2 of Exhibit 1.a. An amendment executed in accordance with Section 2 of Exhibit 1.a will reset the 10% threshold.
- 5.05 Acknowledgement of Credit:** Grantee shall include signage, to the extent practicable, informing the public that the Project received funds through the CDFW Nature Based Solutions: Wildlife Corridors Grant Program. Further, Grantee shall include appropriate acknowledgement of credit to the CDFW, for Grantor’s financial support when using any data and/or information developed under this

Q2396066

California Department of Transportation

Agreement (e.g., in posters, reports, publications, presentations).

- 5.06 Notice to Proceed and Landowner Access:** Grantee must not proceed with Task 6 – Project Construction until it has received a Notice to Proceed from the CDFW Grant Manager. The CDFW Grant Manager will not issue a Notice to Proceed until Grantee has secured all required permits, provided copies of such permits to the CDFW Grant Manager, and secured Project Site Access (as defined in Section 6.03.2 of this Agreement) that the CDFW Grant Manager determines is adequate.

SECTION 6 – PROJECT STATEMENT

6.01 Introduction:

Desert Xpress Enterprises, LLC dba Brightline West (Brightline West) proposes to construct a privately owned and operated electrified high-speed passenger railroad between Southern California and Las Vegas, Nevada. The fully grade-separated high-speed rail corridor will be constructed primarily in the Grantee's Interstate 15 (I-15) right of way on an alignment that will largely run in the median of the freeway (the Brightline West System).

CDFW, as trustee of the State's wildlife resources and in collaboration with agency, non-governmental, and academic partners, has prioritized remediation of a barrier to wildlife connectivity presented by the existing I-15 highway and planned Brightline West railway line to be constructed within the I-15 corridor. Construction of dedicated wildlife overcrossings can effectively maintain and restore the ability of terrestrial wildlife to move across the existing highway lanes and a future high-speed railway in the median. CDFW is collaborating with researchers at Oregon State University (OSU) to study movements by the iconic desert bighorn sheep, identifying three priority locations (Cady Mountain at postmile [PM] R116.70, Zzyzx Road at PM R129.75, and Clark Mountain at PM 168.05) where the construction of dedicated wildlife overcrossings will facilitate wildlife movement and enhance connectivity across the entire I-15 corridor¹. Dedicated wildlife overcrossings will protect wildlife and enhance connectivity for terrestrial animals including desert bighorn sheep, mountain lion, and desert tortoise, by providing links to habitat on both sides of the I-15 corridor. Restoring those key habitat linkages will restore the functional metapopulation in which desert bighorn sheep evolved and promote resiliency by enabling immigration, emigration, and gene-flow for all terrestrial animal species. Construction of the I-15 Mojave Wildlife Overcrossings concurrently with the Brightline West System will provide efficiencies among both transportation and conservation goals.

¹ Aiello, C. M., N. L. Galloway, P. R. Prentice, N. W. Darby, D. Hughson, and C. W. Epps. 2023. Movement models and simulation reveal highway impacts and mitigation opportunities for a metapopulation-distributed species. *Landscape Ecology* 38:1085–1103. <https://doi.org/10.1007/s10980-023-01600-6>

Q2396066

California Department of Transportation

In February 2023, Grantee, Brightline West, and CDFW executed an agreement to memorialize their commitment to design and construct the I-15 Mojave Wildlife Overcrossings. As a result, **Streets and Highways Code**, Section 143.2 was passed into law on July 10, 2023. Grantee has been authorized by this legislation to, without limitation, conduct the following key activities: (1) negotiate for and enter into an authorized agreement with Brightline West to develop, design, procure and construct the I-15 Mojave Wildlife Overcrossings; (2) determine and appropriate any lawful source of funding or financing for the development or construction of these crossings and (3) apply for a competitive grant from federal grant programs to fund activities associated with construction of these crossings. Grantee must also consult with CDFW and with entities with expertise in the development, design, and construction of wildlife overcrossing structures as part of the development process.

Grantee and CDFW have worked cooperatively to develop a coordinated path to implement these wildlife overcrossings. Grantee is the public sponsor for the I-15 Mojave Wildlife Overcrossings project and is responsible for project funding, Federal and State grant applications, leading the Bureau of Land Management right of way transfer process, and is the NEPA and CEQA environmental Lead Agency. CDFW is a NEPA Cooperating and CEQA Responsible Agency and will lead coalition building, support Federal and State grant applications and Bureau of Land Management right-of-way transfer, and support of operation and maintenance for the I-15 Mojave Wildlife Overcrossings once constructed. Brightline West will provide design and permitting support for the I-15 Mojave Wildlife Overcrossings, support Federal and State grant applications, and provide design build project construction management and implementation.

Objectives: Specific objectives of this Project are to benefit desert bighorn sheep (*Ovis canadensis nelsoni*), mule deer (*Odocoileus hemionus*), mountain lion (*Felis concolor*), bobcat (*Lynx rufus*), desert tortoise (*Gopherus agassizii*), and other terrestrial mammal and reptile populations in the Mojave Desert, by restoring habitat connectivity at three priority locations. The existing I-15 has created a legacy, linear barrier that isolates desert bighorn sheep populations by bisecting suitable and historical habitats. CDFW's *Restoring California's Wildlife Connectivity 2022* report lists desert bighorn sheep as a target species for top priority connectivity projects and identifies the Cave Mountain (also known as Cady Mountain), Soda Mountain (Zzyzx Road), and Clark Mountain segment as a top priority for reestablishing connectivity. This Project will also assist in conserving ecosystem resilience. By restoring the ability for desert bighorn sheep and other wildlife to cross I-15, the barrier effects of I-15 will be significantly diminished. With implementation of the Project, wildlife will be allowed to move freely to find food and mates.

Q2396066

California Department of Transportation

6.02 Project Description:

6.03.1 Location: Grantee will implement the project on approximately 20.5 acres of publicly owned property at three locations along I-15, Cady Mountain (PM R116.70; 35.088, -116.322), Zzyzx Road (PM R129.75; 35.195, -116.142), and Clark Mountain (PM 168.05; 35.475, -115.572), in San Bernardino County (Property).

Each wildlife overcrossing will be 100-feet in width. The span length of the overcrossings varies depending on the topography at each site - approximately 198 feet long at Cady and Clark Mountains and 186 feet long at Zzyzx Road Mountain. Each side of the overcrossing will feature a concrete barrier, topped by wire fencing, with directional fencing parallel to the I-15 corridor extending from the overcrossing surface to guide animals to the overcrossings. The extent of directional fencing is based on analysis by collaborators at Oregon State University (OSU) and recommendations from CDFW. The deck of the bridges will be covered with native soil to match the characteristics of the surrounding areas.

Locations for the three overcrossings have been determined in partnership with OSU and CDFW at key sites where desert bighorn sheep frequently approach the highway, and where habitat suitability modeling indicates high-quality habitat on the opposite of the I-15 corridor. The directional wildlife fencing will serve to guide desert bighorn sheep to the wildlife overcrossings and deter animals from entering the highway, where they could be struck by vehicles. The wildlife fencing will include a bottom portion appropriate to direct desert tortoise (*Gopherus agassizii*) away from the highway and towards undercrossings and overcrossings. The Project will facilitate animal movement, thus restoring and enhancing connectivity for desert bighorn sheep and other terrestrial species at overcrossing locations, with positive impacts of restored connectivity extending beyond those key connecting points.

6.02.1 Project Site Access: Grantee with concurrence from its subcontractor will give Grantor and its employees and agents written permission in the form of an encroachment permit under Streets and Highways Code section 600 to access the Project Site at least once every 12 months from the date of Grantor's Notice to Proceed until 25 years after the end of the Agreement Term for purposes of inspections and monitoring (Project Site Access). Caltrans will waive encroachment permit fees, under Streets and Highways Code, Section 671.1. The Monitoring Plan (see, 6.02.3 – Task 5.1) will include definitive access terms through the encroachment permit process.

6.02.2 Materials and Equipment: Equipment purchases must comply with Section 19 of Exhibit 1.a. All materials and equipment are included in the subcontractor costs or will be provided as cost share by Grantee.

Q2396066

California Department of Transportation

6.02.3 Project Implementation: Consistent with Grantee's proposal for the Project, Grantee will complete the following tasks in accordance with Section 6.04 – Schedule of Due Dates and Deliverables.

Task 1 – Project Management and Administration

Grantee will provide technical and administrative services associated with implementation of the Project, including managing this Agreement, assuring all permits are finalized, securing Project Site Access, administering subcontracts, invoicing and payments, drafting and finalizing progress and final reports, and data management.

Subtask 1.1 – Quarterly Progress Reports

Grantee will prepare and submit Quarterly Progress Reports during Project design and construction, to CDFW Grant Manager as scheduled in Section 6.04- Schedule and Deliverables and specified in Section 8 – Reports.

Subtask 1.2 – Stakeholder Outreach

CDFW and Grantee will form a Tribal and Stakeholder Outreach Committee (TSOC) to be comprised of one or more subject-matter experts from Grantee, CDFW, and Brightline West to meet monthly to address technical Project issues. The TSOC will focus on Tribal notification and consultation; coordination with federal, state, and local agencies; and outreach to stakeholders and the public.

Subtask 1.3 Monthly Invoices

Grantee will prepare and submit Monthly Invoices during Project construction to CDFW Grant Manager using instructions detailed in Section 9.02 – Payment Provisions.

Subtask 1.4 – Executed Subcontracts

Grantee may award subcontracts to qualified consultants or other agencies. Grantee will select a subcontractor by a process that complies with **Streets and Highways Code** section 143.2 and prepare a legally enforceable contract between the Grantee and its anticipated subcontractor, Brightline West. The contract will describe the scope of work and definitive deliverables for any subcontractor.

Grantee will submit the subcontract to CDFW Grant Manager as scheduled in Section 6.04 – Schedule and Deliverables. Subcontractor activities will be documented in Quarterly Progress Reports.

Task 2 – Acquire Permits

Grantee will acquire and submit required regulatory permits prior to conducting groundwork. This task also includes any required permit field surveys.

Q2396066

California Department of Transportation

Permits will be submitted to CDFW Grant Manager as scheduled in Section 6.04 - Schedule and Deliverables.

Task 3 – Project Workplan

Grantee, with the support of its Subcontractor, will submit a draft and final Project Work Plan, defined as Grantee's standard Project initiation and approval documents (e.g., the Project Initiation Report and Project Report).

Project Work Plan will be submitted to CDFW Grant Manager as scheduled in Section 6.04 - Schedule and Deliverables.

Task 4 – Engineering Revised Design Plans and Oversight

Grantee will conduct or cause to be conducted through its Subcontractor a Construction contractor procurement process, will oversee the preparation of Construction subcontract documents, will oversee the revised 100% design plans and Basis of Design as required, provide engineering oversight review during construction, conduct or cause to be conducted through its Subcontractor an as-built survey, and provide engineering contingency support as required during bidding and Construction subcontractor selection.

Documentation of Construction contractor procurement process, Draft and final revised design plans, and as-built plans will be submitted to CDFW Grant Manager as scheduled in Section 6.04 - Schedule and Deliverables.

Task 5 – Project Monitoring

Subtask 5.1 Development of Long-Term Monitoring and Management Plan (Monitoring Plan)

Grantee, in coordination with CDFW will assist in development and implementation of a Project Monitoring and Long-Term Management Plan (Monitoring Plan); and conduct project monitoring, maintenance, and adaptive management, in coordination with CDFW, as needed during project term according to the Monitoring Plan. Monitoring Plan will include pre-and post-project video and photo point monitoring and documentation of project construction, monitoring designed to determine project success, and monitoring required by permitting agencies.

Subtask 5.2 – Post-Construction Monitoring, Year 0–2

Grantee, in coordination with CDFW, will install and maintain video and still photo monitoring cameras incorporating remote access, to monitor approaches and traverses of overcrossing structures, monitor the integrity and functionality of wildlife overcrossings, detect incidents of trespass or vandalism. CDFW will assist in monitoring video and still images for wildlife use and will continue to deploy and monitor GPS collars on desert bighorn

Q2396066
California Department of Transportation

sheep in project areas to monitor movements and responses by terrestrial wildlife species to the increased connectivity provided by wildlife overcrossings.

Subtask 5.3 – Post-Construction Monitoring, Year >2
CDFW, in coordination with Grantee, will install and maintain still photo monitoring cameras incorporating remote access to continue monitoring approaches and traverses of wildlife overcrossings by terrestrial wildlife species. CDFW will monitor images and will continue to deploy and monitor GPS collars on desert bighorn sheep in project areas to monitor movements and responses by terrestrial wildlife species to the increased connectivity provided by wildlife overcrossings.

Monitoring and Long-Term Management Plan, and Monitoring Results will be submitted to CDFW Grant Manager as scheduled in Section 6.04.

Task 6 – Project Construction
Grantee will construct or cause to be constructed through its Subcontractor the wildlife overcrossings and associated fencing, and install revegetation as described in Project Design Plans and as scheduled in the Project Work Plan.

Summaries of project progress will be included in quarterly progress reports submitted to CDFW Grant Manager as scheduled in Section 6.04.
- Schedule and Deliverables.

6.04 Schedule of Due Dates and Deliverables:

<u>Task</u>	<u>Description</u>	<u>Deliverables</u>	<u>Estimated Completion Dates</u>
1	Project Management and Administration	Quarterly Progress Reports	Due within 30 days following each calendar quarter (March, June, September, December) following grant execution.
		Monthly Invoices	Due within 30 days following each calendar month following grant execution.
		If applicable Copies of Executed Subcontracts	July 1, 2024
		Submit Project Data	With Final Report

Q2396066

California Department of Transportation

<u>Task</u>	<u>Description</u>	<u>Deliverables</u>	<u>Estimated Completion Dates</u>
		Final Progress Report	Due no later than the Grant Term end date.
		Final Invoice	Due no later than 30 days after the Grant Term end date.
2	Project permits	CEQA documentation All other required permits.	Due prior to starting on the groundwork
3	Project Workplan	Project Initiation Report	July 31, 2024
		Project Report	August 31, 2024
4	Engineering Revised Design Plans and Oversight	Draft revised design plans	April 30, 2025
		Final revised design plans	June 30, 2025
		Documentation of Subcontractor procurement process	With Quarterly Report
		As-built memo	30 days post construction
5	Project Monitoring	Draft Monitoring and Long-Term Management Plan	Draft September 30, 2024
		Final Monitoring and Long-Term Management Plan	Final November 30, 2024
		Pre- and post-project monitoring reports as required by permits	With subsequent status reports
		Cumulative monitoring report including photo point documentation	February 29, 2028
6	Project Construction	Summaries of project progress	With subsequent status reports

SECTION 7 – CONTACTS

The point of contact may be changed at any time by either party by providing a 10–day advance written notice to the other party. The Parties hereby designate the following points of contact during the Term of this Agreement:

Q2396066

California Department of Transportation

CDFW Grant Manager		Grantee Project Manager	
Name:	Daniel Burmester	Name:	Nader Naguib
Title:	Senior Environmental Scientist	Title:	Project Manager
Address:	P.O. Box 944209 Sacramento, CA 94244-2090	Address:	464 W Fourth Street San Bernardino, CA 92401
Phone:	(916) 594-3734	Phone:	(951) 818-9929
Email:	Daniel.Burmester@wildlife.ca.gov	Email:	Nader.Naguib@dot.ca.gov

Direct all administrative inquiries to:

CDFW Grant Coordinator		Grantee Project Coordinator	
Name:	Ariel Boone-Worthman	Name:	Nader Naguib
Title:	Grant Coordinator	Title:	Project Manager
Address:	P.O. Box 944209 Sacramento, CA 94244-2090	Address:	464 W Fourth Street San Bernardino, CA 92401
Phone:	(916) 594-3724	Phone:	(951) 818-9929
Email:	ariel.boone- worthman@wildlife.ca.gov	Email:	Nader.Naguib@dot.ca.gov

SECTION 8 – REPORTS

8.01 Progress Reports: Grantee will submit Quarterly Progress Reports that comply with the requirements below to the CDFW Grant manager. The CDFW Grant Manager will provide Grantee with a sample Progress Report upon request.

1. **Requirements:** Grantee name, the Project title, this Agreement number, and dates progress report covers;
2. Activities and tasks performed and/or completed, a summary of progress to date including progress since the last report, and a brief outline of upcoming work scheduled for the subsequent quarter;
3. Documentation, in general, of Grantee's Subcontractor activities;
4. Updates on progress towards meeting project objectives, output and outcome performance measures;
5. Document delivery of any intermediate work products;
6. Costs incurred during the subject period, total of costs incurred to date, and the remaining balance;
7. Any problems encountered while performing the tasks and proposed solutions, timeline for resolution, and status of previously unresolved problems; and
8. Grantee must submit Quarterly Progress Reports electronically in PDF or Microsoft Word compatible format and conform to the templates provided by the CDFW Grant Manager.

8.02 Final Progress Report: Grantee must submit Final Progress Report electronically

Q2396066

California Department of Transportation

to the CDFW Grant Manager by the dates listed in Section 6.03.6 – Schedule of Due Dates and Deliverables. The Final Progress Report must summarize the life of the Agreement and describe the work and results pursuant to Section 6 - Project Statement, as well as summarize the Project's accomplishments consistent with the project's objectives. Grantee shall include a Final Invoice (as defined in Section 9.02.2 of this Agreement) with the Final Progress Report. The CDFW Grant Manager will provide Grantee a final progress report template.

- 8.03 Document Accessibility:** Grantee must submit all documentation required as part of this agreement to the CDFW Grant Manager in a format that meets web content accessibility standards (<https://www.wildlife.ca.gov/Accessibility>).

SECTION 9 – BUDGET AND PAYMENT

- 9.01 Budget Details and Funding Summary:** Grantor will provide an amount not to exceed \$20,000,000 as detailed below in the Line Item Budget Detail (Budget) below. Grantee or its partners will provide up to \$122,000,000 in funds or in-kind services as cost share to complete tasks described in Section 6 – Project Statement. Grantee will provide Grantor accurate records of all cost share with Grantee's Final Report.

Line Item Budget Detail	
A. PERSONNEL SERVICES	
None	\$0
Subtotal Personnel Services	\$0
Staff Benefits	\$0
Subtotal Personnel Services	\$0
B. OPERATING EXPENSES: GENERAL	
None	\$0
Subtotal Operating Expenses: General	\$0
C. OPERATING EXPENSES: SUBCONTRACTORS	
Brightline West	\$20,000,000
Subtotal Operating Expenses: Subcontractors	\$20,000,000
D. OPERATING EXPENSES: EQUIPMENT	
None	\$0
Subtotal Operating Expenses: Equipment	\$0
E. INDIRECT COSTS	
Indirect Charge Rate 10% (Applies to Sections A + B, and the first \$25K of each subcontractor)	\$0
F. GRAND TOTAL (A+B+C+D+E)	\$20,000,000

Any changes or modifications to a fund source indicated below must be promptly reported to CDFW Grant Manager, in writing.

Q2396066

California Department of Transportation

Funding Sources Summary (Thousands)			
Source of Funds	Cash	In-Kind	Total
CDFW	\$20,000	\$	\$20,000
Other State Agency(ies)	\$	\$	\$
Federal (List by name)	\$	\$	\$
Grantee (indicate if Federal funds) Caltrans	\$71,583	\$17,430	\$89,013
Other(s) including partners Brightline West	\$	\$33,000	\$33,000
Total Project Cost	\$91,583	\$50,430	\$142,013

9.02 Payment Provisions:

9.02.1 Disbursements: Grantor will disburse Grant Funds to Grantee not more frequently than monthly in arrears, upon receipt of an original itemized invoice and any required mandatory documentation as identified in Section 6.04 – Schedule of Due Dates and Deliverables.

Grant disbursements will be mailed to the following Grantee address:

Grantee Name:	California Department of Transportation
Attention:	Phoua Cha
Address:	Accounts Receivable, Section B Division of Accounting 1820 Alhambra Blvd Sacramento CA 95816 (279) 234-2963 phoua.cha@dot.ca.gov

9.02.2 Invoice Documentation: Each invoice for payment must be accompanied by a written description, not to exceed two pages in length, of Grantee's performance under this Agreement since the time the previous such report was prepared. The report shall describe the types of activities and specific accomplishments during the period for which the payment is being made rather than merely listing the number of hours worked during the reporting period. The report may be in the form of a Quarterly Progress Report. The final invoice must include a budget summary of all cost share expenditures by fund source, as applicable (Final Invoice). The CDFW Grant Manager will provide Grantee with a sample invoice template. The Final Invoice is due in accordance with Section 6.04 – Schedule of Due Dates and Deliverables. The invoice package must be submitted electronically through CDFW's WebGrants system to the CDFW Grant Manager.

Requirements: The invoice shall contain the following information:

1. The word "Invoice" should appear in a prominent location at the

Q2396066

California Department of Transportation

- top of the page(s);
2. Printed name of Grantee on company letterhead;
3. Grantee's business address, including P.O. Box, City, State, and Zip Code;
4. Name of the CDFW Region/Division being billed;
5. The invoice date and the time period covered; i.e., the term "from" and "to";
6. This Agreement number and the sequential number of the invoice (i.e., Q2396066–Invoice 1);
7. The invoice must be itemized using the categories and following the format of the Budget;
8. The total amount due. This should be in a prominent location in the lower right-hand portion of the last page and clearly distinguished from other figures or computations appearing on the invoice. The total amount due shall include all costs incurred by Grantee under the terms of this grant;
9. The original signature of Grantee; and
10. Grantee must provide supporting documentation for the invoice and actual receipts.

Q2396066

California Department of Transportation

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the Grantor date set forth below the signature.

AUTHORIZED AGENT FOR GRANTEE

By: _____
Signature: Ray Desselte
F77F943467354FA...
Printed Name: Catalino A. Pining III Ray Desselte
Title: District Director, Caltrans District 8
Date: 3/29/2024

Approved as to Form:
DocuSigned by:
Signature: Julie Del Rivo
56AE39A9E25A44B...
Printed Name: Julie Del Rivo
Title: Assistant Chief Counsel
Date: 3/29/2024

Verified as to Funds and Authority
DocuSigned by:
Signature: Corina Harriman
746F8016BD3E4DC...
Printed Name: Corina Harriman
Title: District Budget Manager, District 8
Date: 3/29/2024

Certified as to Financial Terms and Policies:
DocuSigned by:
Signature: Darwin Salmos
33CE937581884BE...
Printed Name: Darwin Salmos
Title: HQ Accounting Supervisor
Date: 4/4/2024

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

By: _____
Signature: Matt Wells
613C2E6C801C4EB...
Printed Name: Matt Wells
Title: Chief, Watershed Restoration Grants Branch
Date: 3/29/2024

This Agreement is exempt from DGS-OLS approval, per SCM 4.06



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

EXHIBIT 1a – PUBLIC ENTITIES GENERAL GRANT PROVISIONS

Q2396066

California Department of Transportation

1. **APPROVAL**: This Agreement is of no force or effect until signed by both Parties. Grantee shall not incur any costs in reliance on this Agreement until this Agreement has been signed by both Parties.
2. **AMENDMENT**: No amendment or variation of the terms of this Agreement shall be valid unless made in writing and signed by the Parties. Only persons duly authorized to sign an amendment on behalf of CDFW may do so. No oral understanding or agreement not incorporated in this Agreement is binding on either of the Parties.
3. **ASSIGNMENT**: This Agreement is not assignable by Grantee, either in whole or in part, without written approval from CDFW.
4. **AUDIT**: Grantee agrees that CDFW, the Department of Finance (“**DOF**”), Department of General Services (“**DGS**”), California State Auditor’s Office (“**CSA**”), or their designated representatives shall have the right to review and to copy any records and supporting documentation related to the performance of this Agreement. Grantee agrees to maintain such records for possible audit for a minimum of three years after CDFW’s final payment to Grantee pursuant to this Agreement, unless a longer period of records retention is stipulated. Grantee agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records.

Further, Grantee agrees to include the following term or a substantially similar term in any subcontract related to performance of this Agreement:

Subcontractor agrees that CDFW, the Department of Finance, Department of General Services, California State Auditor’s Office, or their designated representatives shall have the right to review and to copy any records and supporting documentation related to the performance of this agreement. Subcontractor agrees to maintain such records for possible audit for a minimum of three years after final payment, unless a longer period of records retention is stipulated. Subcontractor agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Subcontractor agrees to put a substantially similar term in any subcontract it executes with another entity related to the performance of this agreement.

5. **INDEMNIFICATION**: Grantee agrees to indemnify, defend, and save harmless the State of California (“**State**”) and CDFW and their officers, agents, and employees from any and all claims and losses accruing or resulting to any and all subcontractors, suppliers, laborers, and any other person, firm, or corporation furnishing or supplying work services, materials, or supplies in connection with the performance of this Agreement, and from any and all claims and losses accruing or resulting to any person, firm, or corporation who may be injured or damaged by Grantee in the performance of this Agreement.

CDFW agrees to indemnify, defend, and save harmless Grantee and its officers, agents, and employees from any and all claims and losses accruing or resulting to any and all subcontractors,



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE EXHIBIT 1a – PUBLIC ENTITIES GENERAL GRANT PROVISIONS

Q2396066

California Department of Transportation

suppliers, laborers, and any other person, firm, or corporation furnishing or supplying work services, materials, or supplies in connection with the performance of this Agreement, and from any and all claims and losses accruing or resulting to any person, firm, or corporation who may be injured or damaged by CDFW in the performance of this Agreement but, collectively, only in proportion to and to the extent that such claims or losses are caused by or result from the negligent or intentional acts or omissions of CDFW or its officers, agents, and employees.

6. **DISPUTES:** Grantee shall continue with its responsibilities under this Agreement during any dispute.
7. **INDEPENDENT CONTRACTOR:** Grantee, and the agents and employees of Grantee, in the performance of this Agreement, shall act in an independent capacity and not as officers or employees or agents of CDFW. Grantee acknowledges and promises that CDFW is not acting as an employer to any individuals furnishing services or work on the Project pursuant to this Agreement.
8. **NON-DISCRIMINATION CLAUSE:** During the performance of this Agreement, Grantee shall not unlawfully discriminate against, harass, or allow harassment against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical disability (including HIV and AIDS), mental disability, medical condition, marital status, age (over 40), sex, sexual orientation, or use of family-care leave, medical-care leave, or pregnancy-disability leave. Grantee shall take affirmative action to ensure that the evaluation and treatment of its employees and applicants for employment are free of such discrimination and harassment. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Grantee shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 (a-f) et seq.) and applicable regulations (California Code of Regulations, Title 2, Section 7285 et seq.). The regulations of the Fair Employment and Housing Commission regarding Contractor Nondiscrimination and Compliance (Chapter 5 of Division 4 of Title 2 of the California Code of Regulations) are incorporated by reference into this Agreement. Grantee shall give written notice of its obligations under this non-discrimination clause to labor organizations with which Grantee has a collective bargaining or other agreement and shall post in conspicuous places available to employees and applicants for employment notice setting forth the provisions of this Section 8.

Further, Grantee agrees to include the following term or a substantially similar term in any subcontract related to performance of this Agreement:

During the performance of this agreement, Subcontractor shall not unlawfully discriminate against, harass, or allow harassment against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical disability (including HIV and AIDS), mental disability, medical condition, marital status, age (over 40), sex, sexual orientation, or use of family-care leave, medical-care leave, or pregnancy-disability leave. Subcontractor shall take affirmative action to ensure that the evaluation and treatment of its employees and applicants for employment



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE EXHIBIT 1a – PUBLIC ENTITIES GENERAL GRANT PROVISIONS

Q2396066

California Department of Transportation

are free of such discrimination and harassment. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Subcontractor shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 (a-f) et seq.) and applicable regulations (California Code of Regulations, Title 2, Section 7285 et seq.). The regulations of the Fair Employment and Housing Commission regarding Contractor Nondiscrimination and Compliance (Chapter 5 of Division 4 of Title 2 of the California Code of Regulations) are incorporated by reference into this agreement. Subcontractor shall give written notice of its obligations under this non-discrimination clause to labor organizations with which Subcontractor has a collective bargaining or other agreement and shall post in conspicuous places available to employees and applicants for employment notice setting forth the provisions of this section. Subcontractor agrees to put a substantially similar term in any subcontract it executes with another entity related to the performance of this agreement.

9. **UNENFORCEABLE PROVISION:** In the event that any provision of this Agreement is unenforceable or held to be unenforceable, then the Parties agree that all other provisions of this Agreement have force and effect and shall not be affected thereby.
10. **REGULATORY COMPLIANCE:** Grantee's implementation of the Project must comply with all applicable federal, state, and local government statutes, laws, regulations, codes, ordinances, orders, or other governmental and quasi-governmental requirements that apply to the Project (including its planning, construction, management, monitoring, operation, use, and maintenance). The costs associated with such regulatory compliance may be reimbursed under this Agreement only to the extent authorized by the Budget Detail and Funding Summary section of this Agreement.

Grantee's implementation of the Project must comply with the California Labor Code. Projects funded in whole or in part with CDFW grant funds may be public works projects under the Labor Code. (See Section 1720 et seq.) Labor Code compliance may require the payment of prevailing wage. Grantee is responsible for Labor Code compliance, and CDFW cannot provide advice about Labor Code compliance.

Grantee's implementation of the Project must comply with the California Business and Professions Code. Grantee shall be responsible for obtaining the services of an appropriately licensed professional if required by the Business and Professions Code, including but not limited to Section 6700 et seq. (Professional Engineers Act) and Section 7800 et seq. (Geologists and Geophysicists Act). CDFW cannot provide advice about Business and Professions Code compliance.

11. **RIGHTS IN DATA:** Grantee agrees that all data, plans, drawings, specifications, reports, computer programs, operating manuals, notes, and other written or graphic work produced in the performance of this Agreement, are subject to the rights of CDFW as set forth in this Section 11. CDFW shall have the right to reproduce, publish, and use all such work, or any part thereof, in any manner and for any purposes whatsoever and to authorize others to do so. If any such work



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
EXHIBIT 1a – PUBLIC ENTITIES GENERAL GRANT PROVISIONS

Q2396066

California Department of Transportation

is copyrightable, Grantee may copyright the same, except that, as to any work which is copyrighted by Grantee, CDFW reserves a royalty-free, nonexclusive and irrevocable license to reproduce, publish, and use such work, or any part thereof, and to authorize others to do so.

- 12. CONTINGENT FUNDING:** It is mutually understood between the Parties that this Agreement may have been written before ascertaining the availability of State appropriation of funds for the mutual benefit of both Parties in order to avoid program and fiscal delays which would occur if this Agreement were executed after that determination was made.

This Agreement is valid and enforceable only if sufficient funds are made available pursuant to the California State Budget Act for the fiscal year(s) covered by this Agreement for the purposes of this program. In addition, this Agreement is subject to any additional restrictions, limitations, or conditions enacted by the State Legislature of any statute enacted by the Legislature which may affect the provisions, terms, or funding of this Agreement in any manner.

If the Legislature does not appropriate sufficient funds for this Agreement, CDFW may terminate this Agreement in accordance with Section 13 of this Exhibit 1.a or amend this Agreement to reflect any reduction of funds.

13. RIGHT TO TERMINATE:

- a. This agreement may be terminated by mutual consent of both Parties or by any Party upon 30 days written notice and delivered in person, USPS First Class Mail, or electronic transmission.
- b. In the event of termination of this Agreement, Grantee shall immediately provide CDFW an accounting of all Grant Funds received under this Agreement.
- c. Any such termination of this Agreement shall be without prejudice to any obligations or liabilities of either Party already incurred prior to such termination. CDFW shall reimburse Grantee for all allowable and reasonable costs incurred by Grantee for the Project, including foreseeable and uncancellable obligations. Upon notification of termination from CDFW, Grantee shall make reasonable efforts to limit any outstanding financial commitments.

14. USE OF SUBCONTRACTOR(S): If Grantee desires to accomplish part of the Project through the use of one or more subcontractors, the following conditions must be met:

- a. Grantee shall submit any subcontracts to CDFW for inclusion in the grant file;
- b. Agreements between the Grantee and the subcontractor must be in writing;
- c. Subcontracts must include language establishing the audit rights of CDFW, DOF, DGS, CSA, or their designated representatives with respect to subcontractors that complies with Section 4 of this Exhibit 1.a.;
- d. Subcontracts must include non-discrimination clause language with respect to subcontractors that complies with Section 8 of this Exhibit 1.a; and
- e. Upon termination of any subcontract, the CDFW Grant Manager shall be notified immediately, in writing.



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

EXHIBIT 1a – PUBLIC ENTITIES GENERAL GRANT PROVISIONS

Q2396066

California Department of Transportation

15. **POTENTIAL SUBCONTRACTOR(S):** Nothing contained in this Agreement or otherwise shall create any contractual relation between CDFW and any of Grantee's subcontractor(s) and no subcontract shall relieve Grantee of its responsibilities and obligations hereunder. Grantee agrees to be as fully responsible to CDFW for the acts and omissions of its subcontractor(s) and of persons directly employed or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by Grantee. Grantee's obligation to pay its subcontractor(s) is an independent obligation from CDFW's obligation to make payments to Grantee. As a result, CDFW shall have no obligation to pay or to enforce the payment of any monies to any of Grantee's subcontractors.
16. **TRAVEL AND PER DIEM:** If the reimbursement of travel or per diem costs are authorized by this Agreement, such costs shall be reasonable and not exceed those amounts identified in the California Department of Human Resources travel reimbursement guidelines. No travel outside the State of California shall be reimbursed unless prior written authorization is obtained from the CDFW Grant Manager.
17. **LIABILITY INSURANCE :** Unless otherwise specified in this Agreement, when Grantee submits a signed Agreement to CDFW, Grantee shall also furnish to CDFW either proof of self-insurance or a certificate of insurance stating that there is liability insurance presently in effect for Grantee of not less than \$1,000,000 per occurrence for bodily injury and property damage liability combined. Grantee agrees to make the entire insurance policy available to CDFW upon request.

The certificate of insurance will include provisions a, b, and c, in their entirety:

- a. The insurer will not cancel the insured's coverage without 30-days prior written notice to CDFW;
- b. The State and CDFW and their officers, agents, employees, and servants are included as additional insured, insofar as the operations under this Agreement are concerned; and
- c. CDFW will not be responsible for any premiums or assessments on the policy.

Grantee agrees that the liability insurance herein provided for, shall be in effect at all times during the term of this Agreement. In the event said insurance coverage expires at any time or times during the term of this Agreement, Grantee agrees to provide, prior to said expiration date, a new certificate of insurance evidencing insurance coverage as provided for herein for not less than the remainder of the term of this Agreement, or for a period of not less than one year. New certificates of insurance are subject to the approval of CDFW, and Grantee agrees that no work or services shall be performed prior to CDFW giving such approval. In the event Grantee fails to keep in effect, at all times, insurance coverage as herein provided, CDFW may, in addition to any other remedies it may have, terminate this Agreement upon occurrence of such event.

CDFW will not provide for, nor compensate Grantee for any insurance premiums or costs for any type or amount of insurance. The insurance required above, shall cover all Grantee supplied personnel and equipment used in the performance of this Agreement. If subcontractors performing



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
EXHIBIT 1a – PUBLIC ENTITIES GENERAL GRANT PROVISIONS

Q2396066

California Department of Transportation

work for Grantee under this Agreement cannot provide to Grantee either proof of self-insurance or a certificate of insurance stating that the subcontractor has liability insurance of not less than \$1,000,000 per occurrence for bodily injury or property damage liability combined, then Grantee's liability insurance shall provide such coverage for the subcontractor.

18. GRANTEE STAFF REQUIREMENTS: Grantee represents that it has or shall secure at its own expense, all staff required to perform the services described in this Agreement. Such personnel shall not be employees of or have any contractual relationship with CDFW.

19. EQUIPMENT PURCHASES: For purposes of this Agreement, "**Equipment**" means tangible personal property having a useful life of four years, and "**Major Equipment**" means Equipment with a unit cost of \$5,000 or more. The unit cost includes the purchase price plus all costs to acquire, install, and prepare the equipment for its intended use. Grantee may purchase Major Equipment under this Agreement only when a specific type Major Equipment is listed in the Budget Details and Funding Summary section of this Agreement. This restriction on the purchase of Major Equipment does not include the lease or rental of Major Equipment. Grantee shall own all Equipment purchased under this Agreement; CDFW does not claim title or ownership to such Equipment. Grantee shall keep, and make available to CDFW upon CDFW's request, appropriate records of all Equipment purchased with Grant Funds. Equipment purchased by Grantee outside the term of this Agreement is not eligible for reimbursement by CDFW under this Agreement.

When Grantee submits an invoice to CDFW for reimbursement of Major Equipment purchase costs, that invoice must include a receipt listing the purchase price of the Major Equipment and the serial number and model number of the Major Equipment. That invoice must also include the location, including street address, where the Major Equipment will be used during the term of this Agreement.

20. GRANTEE'S PROCUREMENT OF GOODS AND/OR SERVICES: Grantee's process for procuring goods or services to carry out the Project under this Agreement must reasonably ensure that Grantee is making sound business decisions.

21. DRUG-FREE WORKPLACE CERTIFICATION: Grantee will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code, Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

- a. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.
- b. Establish a Drug-Free Awareness Program to inform employees about all of the following:
 1. the dangers of drug abuse in the workplace;
 2. the person's or organization's policy of maintaining a drug-free workplace;
 3. any available counseling, rehabilitation, and employee assistance programs; and,
 4. penalties that may be imposed upon employees for drug abuse violations.
- c. Every employee who works on the proposed Agreement will:
 1. receive a copy of the company's drug-free policy statement; and



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
EXHIBIT 1a – PUBLIC ENTITIES GENERAL GRANT PROVISIONS

Q2396066

California Department of Transportation

2. agree to abide by the terms of the company's statement as a condition of employment on the Agreement.

Failure to comply with these requirements may result in suspension of disbursements under this Agreement or termination of the Agreement or both, and Grantee may be ineligible for award of any future State agreements if CDFW determines that any of the following has occurred: (1) Grantee has made false certification or (2) Grantee has violated the certification by failing to carry out the requirements as noted above.

22. UNION ORGANIZING: Grantee acknowledges the applicability to this Agreement of Government Code Sections 16645 through 16649, and certifies that:

- a. No Grant Funds disbursed pursuant to this Agreement will be used to assist, promote, or deter union organizing;
- b. Grantee shall account for Grant Funds disbursed for a specific expenditure pursuant to this Agreement to show those funds were allocated to that expenditure;
- c. Grantee shall, where Grant Funds are not designated as described in Section 22(b) above, allocate, on a pro-rata basis, all disbursements that support the grant program; and
- d. If Grantee makes expenditures to assist, promote, or deter union organizing, Grantee will maintain records sufficient to show that no Grant Funds were used for those expenditures and shall provide those records to the Attorney General upon request.

23. GOVERNING LAW: This Agreement is governed by and shall be interpreted in accordance with the laws of the State of California.

Memorandum

To: RICHARD STONE
SHOPP
HQ Financial Programming

Date: October 16, 2024

File: 08-1N590
0823000021


From: Nader Naguib, PE
Project Manager
District 8

Subject: **PROJECT STATUS UPDATE**

This memorandum is written to accompany the Baseline Agreement for the referenced project.

Project 08-1N590 (PM R114.0/171.5) was amended into the 2022 SHOPP on June 29, 2023 using IJA funding. It was programmed with Caltrans as the implementing agency for PA&ED, Design and Construction. The project proposes to construct 3 wildlife crossings along I-15 for bighorn sheep and other wildlife to provide safe and sustainable passages and restore connectivity. Shortly after 08-1N590 was programmed, Senate Bill (SB) 145 was passed on July 10, 2023. SB 145 authorized Caltrans to enter into agreements with Brightline West for the purpose of project efficiencies between the wildlife crossings project and the Brightline West High-Speed train project. The wildlife crossings project locates within the limits of the Brightline West project, and both will be constructed at the same time frame. The two-party agreement between Caltrans and Brightline was executed on June 28, 2024 (attached). Per the agreement, Brightline assumes responsibility for designing, procuring, delivering, constructing the three wildlife crossings. Brightline will utilize a competitive bidding process to solicit bids to construct the wildlife crossings. The project performance measure is 3 Locations (3 new bridges) under program code 20.XXX.201.999, as mentioned in the project report and PPR.

The following changes have occurred as a result of the passage of SB 145: a) Caltrans role has now changed from lead agency to oversight for all phases except PA&ED and Right-of-Way, Brightline will be the lead agency for Design and Construction; b) Caltrans has executed a grant agreement with CDFW whereby CDFW agreed to fund \$20 million toward construction capital; c) the Brightline West project schedule was delayed and the following CTC actions were requested: 1. Requested a 2-months allocation time extension for phase 1 and 2 at the June 2024 CTC Meeting; 2. Requested a 12-months allocation time extension for phase 3 and phase 4 at the August 2024 CTC meeting. The following tables show the current schedule and cost estimates for various phases as a result of Brightline West project delay and Caltrans role change from lead agency to oversight.

October 16, 2024
Page 2 of 2

A PCR to adjust the cost discrepancies from programmed to current estimates is not doable at this time as the project delivery is scheduled for the current FY 24/25.

Milestone	Current Schedule (PR)	Proposed Dates
R/W Cert M410	09/01/2024	02/03/2025
RTL M460	09/01/2024	02/03/2025
Approve Contract M500	01/01/2025	04/01/2025

Current and Proposed Funds (In Thousands):

Component	Programmed	PR	Current Estimate
PAED Support	4,500	4,500	4,500
PS&E Support	6,750	3,000	3,008
RW Support	180	180	213
Const. Support	15,780	4,500	4,500
RW Capital	652	652	652
Const. Capital	71,583**	84,064	84,064
Total Caltrans Project Cost	99,445	96,896	96,937

*** In addition to the \$71,583,000 programmed under SHOPP, CDFW contributed \$20,000,000 towards construction capital per grant agreement # Q2396066*

C: Meardey Tim
Martin Villanueva
Md Shaheed

Project Report For Project Approval

On Route Interstate 15 (I-15)

Between 2.4 miles north of Afton Road Overcrossing

And 0.1 mile north of Bailey Road Overcrossing

I have reviewed the right-of-way information contained in this report and the right-of-way data sheet attached hereto, and find the data to be complete, current and accurate:

cs *Dustin Ladd* for Rebecca Guirado
REBECCA GUIRADO, District Division Chief, Right-of-Way

APPROVAL RECOMMENDED:

RR *Nader Naguib*
NADER NAGUIB, Project Manager

AB *Haissam Yahya*
HAISSAM YAHYA, Deputy District Director, Traffic Operations

CW *Kurt Heidelberg*
KURT HEIDELBERG, Deputy District Director, Environmental Planning

GH *Jesus Galvan Jr*
JESUS GALVAN, Deputy District Director, Design

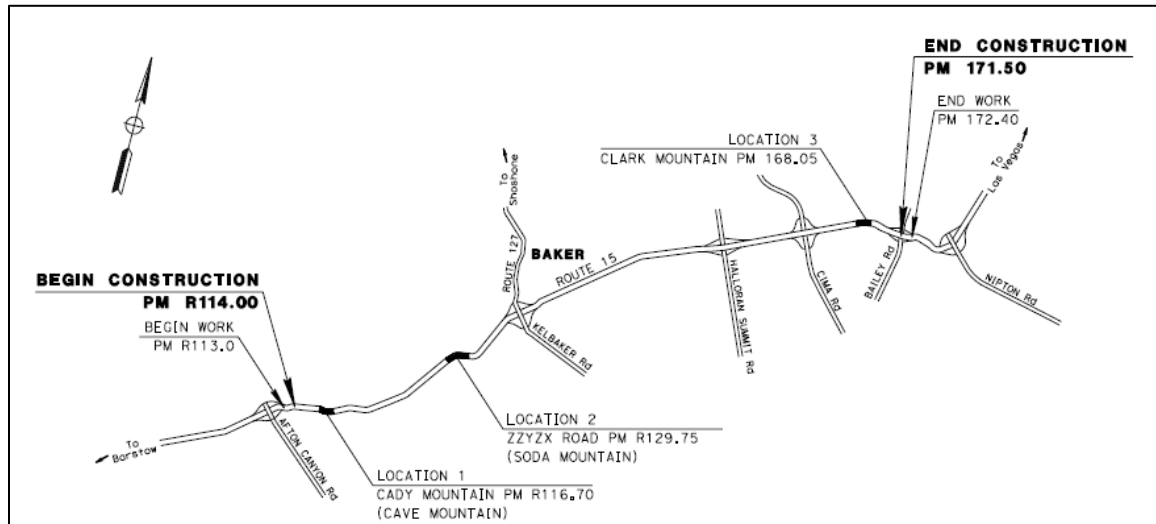
PROJECT APPROVED:

Catalino A. Pinning III
CATALINO A. PINING III, District 8 Director

06/12/2024

Date

Vicinity Map



On I-15 in San Bernardino County near Baker at three locations from 2.4 miles north of Afton Road Overcrossing to 0.1 mile north of Bailey Road Overcrossing.

This project report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



HA VU, REGISTERED CIVIL ENGINEER

6/4/2024

DATE



Concurred by:



Tuan Truong, Office Chief, Design N

6/4/2024

Date

Table of Contents

1. INTRODUCTION	1
2. RECOMMENDATION	1
3. BACKGROUND.....	1
4. PURPOSE AND NEED.....	4
5. ALTERNATIVES.....	7
5A. Viable Alternative: Build Alternative.....	7
5B. Rejected Alternatives: No Build Alternative	9
6. CONSIDERATIONS REQUIRING DISCUSSION.....	10
6A. Hazardous Waste	10
6B. Value Analysis	10
6C. Resource Conservation	10
6D. Right-of-Way Issues	11
6E. Environmental Compliance.....	11
6F. Air Quality Conformity	12
6G. Title VI Considerations	12
6H. Noise Abatement Decision Report	12
6I. Life-Cycle Cost Analysis	12
6J. Reversible Lanes	12
7. OTHER CONSIDERATIONS AS APPROPRIATE	13
8. FUNDING, PROGRAMMING, AND ESTIMATE	17
9. DELIVERY SCHEDULE	18
10. RISK.....	19
11. EXTERNAL AGENCY COORDINATION.....	20
12. PROJECT REVIEWS	21
13. PROJECT PERSONNEL.....	21
14. ATTACHMENTS	22

1. INTRODUCTION

Project Description:

This project is in San Bernardino County near Baker and Mountain Pass along Interstate-15 (I-15) from Post Mile (PM) R114.0 to PM 171.5. It is proposed to construct wildlife crossings and fencing in the Mojave Desert at three locations along I-15 near Cady Mountain (also known as Cave Mountain [PM R116.70]), Zzyzx Road (also known as Soda Mountain [PM R129.75]), and Clark Mountain (PM 168.05).

Project Limits	08-SBd-15-PM R114.0/171.5	
Number of Alternatives	Build Alternative and No Build	
	Current Cost Estimate:	Escalated Cost Estimate:
Capital Outlay Support	12,180,000	12,180,000
Capital Outlay Construction	74,426,000	80,061,000
Capital Outlay Right-of-Way	651,200	651,200
Funding Source	SHOPP Miscellaneous (20. XXX.201.999)	
Funding Year	2022	
Type of Facility	Wildlife Crossing (Structure – Bridge)	
Number of Structures	3	
SHOPP Project Output	3 Locations	
Environmental Determination or Document	Statutory Exemption (SE) for California Environmental Quality Act (CEQA) and Categorical Exclusion (CE) for National Environmental Policy Act (NEPA)	
Legal Description	In San Bernardino County near Baker at three locations from 2.4 miles north of Afton Road Overcrossing to 0.1 mile north of Bailey Road Overcrossing	
Project Development Category	5	

2. RECOMMENDATION

It is recommended that this Project Report (PR) be approved for the Build Alternative and authorization be granted to proceed with the preparation of Plans, Specifications, and Estimates (PS&E).

3. BACKGROUND

I-15 was constructed in the 1960s and stretches from the Mexican border to the Canadian border passing through the states of California, Nevada, Arizona, Utah, Idaho, and Montana. I-15 is a formidable and virtually impenetrable barrier for many wildlife species including desert bighorn sheep. Because of this, their movement between both sides of the I-15 in the Mojave Desert is severely restricted. Bighorn

sheep and other wildlife populations within these areas are fragmented, making wildlife crossings a necessity to restore connectivity.

The Project Initiation Proposal (PIP) No. 4920 (Attachment E) was approved on August 31, 2022, and the Project Initiation Report (PIR) was approved on June 5, 2023, proposing to construct wildlife crossings and fencing in the Mojave Desert at three locations along I-15 near Cady Mountain (PM R116.70), Zzyzx Road (PM R129.75), and Clark Mountain (PM 168.05).

Existing Facility

Roadway Geometric Information and Condition:

Within the project limits, I-15 includes five to ten-foot inside and ten-foot outside shoulders, along with 12-foot lanes paved with Asphalt Concrete (AC).

Traveled Way, Shoulders, and Median Geometric Information

Facility Location	Minimum Curve Radius	Through Traffic Lanes			Paved Shoulder Width		Median Width	Additional Paved Width for Bicycle Lane or Other
(Post Mile Limits)	Radius (ft)	Number of Lanes	Lane Width (ft)	Type (Flexible, Rigid, or Composite)	Left (ft)	Right (ft)	(ft)	(ft)
I-15 NB R116.70	4,995	2	12	Flexible	5	10	72	N/A
I-15 SB R116.70	4,920	3	12	Flexible	10	10	72	N/A
I-15 NB R129.75	3,016	2	12	Flexible	10	10	87	N/A
I-15 SB R129.75	2,868	2	12	Flexible	5	10	87	N/A
I-15 NB 168.05	9,913	3	12	Flexible	10	10	112	N/A
I-15 SB 168.05	9,913	2	12	Flexible	5	10	112	N/A

Notes:

NB: Northbound

SB: Southbound

N/A: Not Applicable

I-15 near Cady Mountain (PM R116.70): I-15 is a five-lane divided freeway with two lanes in the northbound direction and three lanes in the southbound direction. The median width is 72 feet and is unpaved beyond the shoulders.

I-15 near Zzyzx Road (PM R129.75): I-15 is a four-lane divided freeway with two lanes in the northbound direction and two lanes in the southbound direction. The median width is 87 feet and is unpaved beyond the shoulders.

I-15 near Clark Mountain (PM 168.05): I-15 is a five-lane divided freeway with three lanes in the northbound direction and two lanes in the southbound direction. The median width is 112 feet and is unpaved beyond the shoulders.

Corridor Geometric Information and Condition:

Earth retaining systems

There are no existing retaining walls along the I-15 within the project limits.

Guardrail

Metal Beam Guardrail (MBGR) exists along the I-15, but it will not be impacted.

Railroads

There is no existing railroad along the I-15 within the project limits. However, Brightline West (BLW), a private entity, is proposing to construct a high-speed rail system in the median of I-15.

Right-of-Way

The existing Right-of-Way (R/W) width varies from 400 ft to 870 ft.

All work at Cady Mountain (PM R116.7) will be within the State's R/W and no federal lands will be affected.

All work near Zzyzx Road (PM R129.75) will be within the State's R/W and no federal lands will be affected. However, a courtesy letter will be sent to the Bureau of Land Management (BLM) and National Park Service (NPS) since this overcrossing will be in the vicinity of their land.

BLM will be affected at Clark Mountain (PM 168.05), where additional R/W will be needed. The State will seek a Federal Land Transfer/Easement. A courtesy letter will also be provided to the State Lands Commission (SLC) since this overcrossing will be in the vicinity of their land.

Traffic Management System (TMS)

There are existing TMS elements within the project limits that will not be impacted by this project.

Utilities

The Right-of-Way Data Sheet (RWDS) approved on April 18, 2023 (Attachment H) lists several utility companies within the project limits such as Kinder Morgan Energy Partners, Microwave Communications Inc. MCI (Verizon Business), Sprint, and Frontier.

Potential conflicts may arise with the electric and telephone overhead lines near Clark Mountain, which may require an agreement. However, there is flexibility in the design to likely avoid utility relocation. There are no underground utilities near the wildlife crossings.

Utility relocation and potholing are covered in the BLW projects 08-OP400 and 08-OP401, so the cost is not accounted for in the RWDS.

4. PURPOSE AND NEED

Purpose:

The purpose of this project is to restore wildlife connectivity by constructing bridges across I-15 in the vicinity of Zzyzx Road, Cady Mountain, and Clark Mountain Pass in San Bernardino County to function as wildlife crossings. The dedicated wildlife crossings will provide safe and sustainable passages for bighorn sheep and other wildlife across I-15 that restore bighorn sheep wildlife connectivity and allow for the safe movement of animals and the exchange of genetic material. The project will assist in restoring and enhancing wildlife connectivity among metapopulation fragments of bighorn sheep and facilitate crossing of the I-15 by them and other species.

Need:

The need for the proposed project is based on desert bighorn sheep genetic and tracking data that demonstrates I-15 is a movement barrier for sheep that have historically traveled between the northern and southern mountain ranges. While there are several undercrossings (washes and large box culverts) present throughout the I-15, data shows desert bighorn sheep are less likely to move through these structures, unlike other medium and large mammals such as bobcats and mountain lions. Like other large mammals, desert bighorn sheep need large, connected habitats to breed and thrive. I-15 divides the previously connected ranges into isolated habitat fragments. This decreases desert bighorn sheep's genetic diversity, increases inbreeding, and increases territorial disputes amongst males. The fragmentation of habitat currently forces desert bighorn sheep to cross over I-15, increasing the risk of vehicular crashes and desert bighorn sheep fatalities. From 2007 to 2020, at least 59 desert bighorn sheep were killed by vehicles in California. Dedicated wildlife crossings are needed to restore wildlife connectivity.

4A. Problem, Deficiencies, Justification

Environmental mitigation measures were not considered during the construction of I-15 and most Southern California freeways in the 1950s and 1960s. Consequently, I-15 fragmented the natural habitats of many wildlife species. Existing bridges and culverts allow smaller animals to cross, but there are no functional crossings for large mammals like desert bighorn sheep. Without the addition of wildlife crossings near Cady Mountain, Zzyzx Road, and Clark Mountain Pass in San Bernardino County, habitat fragmentation and its negative impact on biodiversity will persist and worsen, once future projects, such as the proposed high-speed rail along the I-15 corridor proposed by BLW, is constructed in the median.

4B. Regional and System Planning

Corridor Overview

I-15 starts at its junction with I-5 in San Diego County and ends at the United States-Canada International Border in the State of Montana. In District 8, it runs from the Riverside/San Diego County Line to the Nevada State Line, covering 239 miles. Within District 8, the route varies from four to eight lanes in width and has no High Occupancy Vehicle (HOV) lanes.

System Planning Route Designation

I-15 is part of the Freeway and Expressway system, National Highway System, and has a truck network designation of National Network. It is also part of the Strategic Highway Network and is identified as part of the Strategic Interregional Corridors and Priority Interregional facilities in the Interregional Transportation Strategic Plan (ITSP).

I-15 is considered a priority interregional highway and has some of the highest daily vehicle traffic as well as freight traffic that is expected to increase significantly in the near future. The ITSP is aligned with other plans including the Climate Action Plan for Transportation Infrastructure which has several goals including aligning transportation investments with conservation priorities to reduce transportation's impact on the natural environment. This project to construct wildlife overcrossings would further that goal by minimizing the impact the I-15 has on wildlife movement.

State Planning

This project's scope aligns with the goals and strategies of various State transportation plans, modal plans, and planning initiatives including the California Transportation Plan 2050, California Transportation Asset Management Plan, Statewide Wildlife Action Plan, Caltrans Strategic Management Plan, State Highway System Management Plan, and Strategic Highway Safety Plan.

The proposed project scope addresses the goals by aiming to conserve and restore habitat connectivity, providing safe passages for wildlife, and facilitating the exchange of genetic material.

Regional and Local Planning

The Southern California Association of Governments (SCAG)'s Sustainable Communities Strategy (SCS) lists "Preserve, enhance, and restore regional wildlife connectivity" as one of the strategies/tools the region could use to meet the Regional Transportation Plan (RTP)'s vision and goals. Constructing wildlife crossings is in alignment with and will further the regions goals of enhancing wildlife connectivity. A Transportation Planning Scoping Information Sheet (TPSIS) was prepared for this project (Attachment G).

Overlapping Projects

Coordination may be necessary with the projects listed below that overlap with the project limits.

EA	Project Limits	Scope of Work	Status	Milestone Date
0P400	PM 51.6-186.2	Construct a 135-mile long high speed passenger rail, primarily in the median of I-15	Active	RTL 09/15/25 Award 10/11/24 CCA 04/03/28
1L150	PM R120.0- 144.0	Pavement rehabilitation, upgrade guardrail, culverts, rock slope protection, sign panels and lighting rehabilitation.	Active	PA&ED 06/21/24 RTL 12/01/25 Award 07/06/26 CCA 12/06/27
1J330	PM 160.9- 161.5	Upgrade water and wastewater treatment at the Valley Wells Safety Roadside Rest Area.	Active	RTL 05/31/24 Award 10/24/24 CCA 07/01/26

CCA – Construction Contract Acceptance

RTL – Ready to List

PA&ED – Project Approval and Environmental Document

4C. Traffic

Current and Forecasted Traffic

Traffic Volumes will not be required per District 8 practice because the proposed project does not increase the capacity or improve the operations of the facility to carry traffic.

Collision Analysis

The Traffic Accident Surveillance and Analysis System (TASAS) Table B, data retrieved on December 26, 2023, for the three-year period from July 1, 2020, to June 30, 2023, is shown in the following table.

County-Route (Post mile range)	Total Number of Collisions	Actual Rate (Collisions/Million Vehicle Miles)			Average Rate (Collisions/Million Vehicle Miles)		
		F ¹	F+I ²	Total ³	F ¹	F+I ²	Total ³
SBd-15 (PM R116.65-R116.75) both directions	1	0.000	0.021	0.021	0.005	0.090	0.265
SBd-15 (PM R129.70-R129.80) both directions	1	0.000	0.000	0.021	0.005	0.090	0.265
SBd-15 (PM 168.00R-168.10R) NB	1	0.000	0.000	0.049	0.004	0.125	0.355
SBd-15 (PM 168.00L-168.10L) SB	0	0.000	0.000	0.000	0.005	0.090	0.265

Notes: 1. Fatal collisions; 2. Fatal collisions plus injury collisions;
3. All reported crashes (includes Property Damage Only (PDO) crashes).

As shown in the above table, all actual rates are lower than the statewide average rates for similar facilities. Detailed analysis per the Traffic Accident Surveillance and Analysis System (TSAS) Selective Accident Retrieval (TSAR) generated on 12/26/2023 for I-15 (both directions) PM R116.65 to R116.75 and PM 168.00R to 168.10R shows that the type of collision was overturn due to improper turn. Detailed analysis per TSAR generated on 12/26/2023 for I-15 (both directions) PM R129.70-R129.80 shows that the type of collision was rear-end due to speeding.

The Highway Safety Manual (HSM) was considered and determined to be applicable since revisions are being made to the facility's geometry.

The HSM Analysis shall be completed by BLW in accordance with the cooperative agreement for this project during the PS&E phase.

5. ALTERNATIVES

5A. Viable Alternative: Build Alternative

Proposed Engineering Features

This alternative will construct wildlife crossings and directional fencing in the Mojave Desert at three locations along I-15 near Cady Mountain (PM R116.70), Zzyzx Road (PM R129.75), and Clark Mountain (PM 168.05).

The bridges are proposed to be three-span precast arch structures with openings for the existing and SB I-15 lanes and the future BLW rail in the median. The bridges are proposed to be 100 ft wide, 186 ft to 198 ft long, and the spans will accommodate space for one additional future travel lane in each direction. Railing and fencing will be installed at the edges of the bridges and wire mesh directional fencing will also be installed at various lengths along the access control line to direct wildlife to the crossings. The limits of this fencing will be based on recommendations from wildlife

experts. The surface of the bridges will be composed of native materials and planted in native vegetation to match the characteristics of the surrounding areas. Other bridge types may be considered during the design phase.

A Structure Preliminary Geotechnical Report (SPGR) for the three proposed wildlife crossings have been prepared for this project (Attachment Q).

Aesthetic and Landscape Treatment

The bridges' surfaces will match the native characteristics of the surrounding areas, which include low-lying shrubs, desert soils, rolling dunes, rocky mountains, gravel, and rocks. Aesthetic features will be included on the three new bridge designs and landscape restoration guidelines will be developed to create a visually cohesive pattern while preserving the site's unique character and garnering public support for the project. All visible concrete structures and surfaces will be designed to visually blend with the adjacent landscaping rock outcroppings and natural plantings. The aesthetic treatment will incorporate color, texture, and patterns in alignment with the Brightline West Project's Project Aesthetic and Landscape Masterplan (PALM). Laser-cut steel plates featuring symbols and patterns shall be utilized to identify the bighorn sheep where appropriate. The objective is to create a visual link between both projects and the surrounding landscape tying to the overall unified corridor concept.

High-Occupancy Vehicle Lanes

There is no HOV lane within the project limits.

California Highway Patrol Enforcement Activities

The project may impact California Highway Patrol (CHP) enforcement activities during construction. Stage construction and lane closures should be staged to minimize the impact.

Earth Retaining System

The project does involve earth retaining systems for bridge abutments.

Erosion Control

The project has disturbed soil areas that will require erosion control measures both during construction and after project completion. Topsoil and duff will be the main focus of the erosion control. Native planting will be used to restore the project site, including restoration of native vegetation and rock outcroppings. Duff should be collected during construction and used to facilitate site restoration.

Context Sensitive Solutions

It is anticipated that the proposed project will be developed consistent with the Caltrans Director's policy on Context Sensitive Solutions, the Caltrans Highway Design Manual, FHWA regulations, FHWA's Flexibility in Highway Design publication, and the American Association of State Highway Transportation Officials' Policy on Geometric Design of Highways and Streets, which all share a philosophy that explicitly allows flexibility in applying design philosophy that seeks transportation solutions that improve mobility and safety while complementing and enhancing community values and objectives. In addition, the aforementioned landscaping features will be included in the project.

Highway Planting and Irrigation

The landscape treatment will consist of habitat consistent with the surrounding desert landscape, including low-lying shrubs, desert soils, rolling dunes and rocky mountain gravel and rocks. Plant establishment will be completed by hydroseeding and transplanting Joshua trees to integrate the distributed area into the surrounding environment and revegetate. However, no irrigation will be installed since there is no water source within the project limits.

Vegetation restoration including erosion control with hydroseeding, duff, and native topsoil will be part of the Landscape treatment.

Noise Barriers

There is no noise barrier within the project limits.

Nonstandard Design Features

This project will not propose new nonstandard features. Therefore, it is anticipated that a Design Standard Decision Document (DSDD) will not be required. However, if there are newly proposed nonstandard features in the subsequent phases of the project, these need to be documented in a DSDD.

5B. Rejected Alternatives: No Build Alternative

The No Build Alternative fails to address the project purpose and need. This alternative would leave the existing facility of I-15 in its current condition and no proposed improvements would be made. As a result, it will not address any wildlife crossing connectivity improvements along I-15. There are no capital costs associated with this alternative.

6. CONSIDERATIONS REQUIRING DISCUSSION

6A. Hazardous Waste

An Initial Site Assessment (ISA) checklist (Attachment M) was prepared for this project on May 2, 2023 and updated on September 28, 2023. The project has low risk for hazardous waste involvement. There are no storage structures or pipelines, no contamination, and no hazardous contaminants of concern at or near each of the three project sites. There is no naturally occurring asbestos (NOA), mines, faults, or other sources of contamination at or within one mile from each of the three project sites. A detailed site investigation (DSI) for the presence of aerially deposited lead (ADL) and Title 22 metals was conducted for each site during August-September 2023. These investigations disclose the potential presence of hazardous materials at the project site. With the implementation of measures included in these studies, impacts due to the presence of hazardous materials will be avoided. A lead compliance plan (LCP) and measures for treated wood waste are required.

6B. Value Analysis

Value Analysis (VA) studies are required on all federally aided projects greater than \$50 million in cost on the National Highway System (NHS) and on bridge projects greater than \$40 million in cost.

The VA Study Summary Report (Attachment R), dated September 21, 2023, recommends incorporating VA alternatives 1.0, 2.0, and 3.0. This strategy proposes to implement a more cost-effective alternative of MSE wall that also considers corrosive factors of the materials used while providing a longer MSE wall life expectancy (Alternative 1.0). Additionally, this strategy seeks to reduce material quantity by implementing a combined graded slope with a reduced-height MSE wall (Alternative 2.0). This would also result in ease of access for species that are unable to access the crossings due to the degree of incline included in the original design concept. Alternative 3.0 directly addresses the lack of funding and provisions for the planned design of architectural treatments which were considered important to the aesthetics of a major gateway in and out of California.

The three alternatives within this strategy have the net effect of improving upon the baseline concept performance by 3.3%. Together, the anticipated cost impact is roughly an additional \$2.2M. When these value elements are combined, they represent an overall value improvement over the baseline concept of 2.1%.

6C. Resource Conservation

Existing facilities are anticipated to be preserved within the project limits, and no salvaging is anticipated. Opportunities to use recycled materials for new construction will be considered in the design phase.

6D. Right-of-Way Issues

A RWDS (Attachment H) was completed on May 4, 2023 and revised on October 25, 2023. The total R/W cost for the programmable alternative was estimated at \$651,200 which include acquisition of offside mitigation and project permit costs. Utility relocations and potholing costs will be covered under BLW project EA 08-0P400 and are not included in the RWDS, although it is anticipated to cost \$116,750.

A Federal Land Transfer/Easement will be required from BLM at Clark Mountain. The project will also be in the vicinity of BLM and NPS near Zzyzx Road and SLC at Clark Mountain, so courtesy letters will be provided.

6E. Environmental Compliance

Caltrans is the California Environmental Quality Act (CEQA) Lead Agency for all improvement projects on the State Highway System (SHS). Caltrans is also the National Environmental Policy Act (NEPA) Lead Agency for this project. The CEQA Statutory Exemption / NEPA Categorical Exclusion Determination Form (Attachment J) was approved on October 16, 2023.

In compliance with the provision of the CEQA and per Assembly Bill (AB) 155, Public Resource Code section 21080.56 this project is Statutorily Exempt from CEQA.

In compliance with the provisions of the NEPA, this project is Categorical Excluded under NEPA.

An Environmental Certification will be required at the end of the Project Specification and Estimates (PS&E) phase and a Certificate of Compliance (CEC) will be required following the completion of construction of the project.

Stormwater

A Storm Water Data Report (SWDR) (Attachment K) has been prepared for this project to meet the demands of the Storm Water Management Plan (SWMP) regarding controlling pollution discharges and meeting permit requirements. The preliminary information in the SWDR prepared for the PAED phase will be reviewed, updated, and confirmed by the Office of Storm Water Quality, and if required, will be revised in the SWDR prepared during subsequent phases of the project.

Visual Impact Assessment Study

Caltrans District 8 Design and Environmental teams have been holding regular meetings with the Caltrans Headquarters Bridge Aesthetics team to discuss updates regarding the Visual Impact Assessment (VIA). As of 8/15/2023, it was confirmed that BLW will proceed with the arch type structure for the wildlife crossings. The theme of the overcrossings is proposed to be the Environmental Cycle of the bighorn sheep, utilizing metal to mirror the silhouettes used on the other side of the overcrossing. It is

proposed that the metal silhouettes be worked in smaller pieces to be able to transport to the site. There are finishing touches to incorporate the native vegetation and hardscape, simulating the landscape and incorporating it into the native landscape setting.

The VIA simulations (Attachment S) can help guide decisions on the aesthetics of bridge elements - such as color, texture, and pattern - during the PS&E phase.

6F. Air Quality Conformity

The project has been determined to fall under one of the categories of projects that are listed in Table one (1) of the Carbon Monoxide (CO) protocol or Table two (2) of 40 Code of Federal Regulations (CFR) 93.126. The proposed project has been identified as matching the categories “Safety Improvement Program”, “Plantings, Landscaping, etc.”, and “Transportation Enhancement Activities”. All projects listed in Table 1 or Table 2 of 40 CFR 93.123 are exempt from all emissions analyses. The proposed project is considered an exempt project and as such, no air quality study is needed. Additionally, transportation air quality conformity requirements do not apply to this project.

6G. Title VI Considerations

The project is located in an area with a CalEnviroScreen 4.0 overall percentile score of 75. Additionally, the California Healthy Places Index map indicates that the census tract where the project is located is in the lower 89% of census tracts with ‘healthy condition’ in comparison to other census tracts in the state. The project is not expected to negatively affect disadvantaged communities given that the scope of the project primarily affects wildlife. Therefore, this project will comply with Title VI of the Civil Rights Act of 1964.

6H. Noise Abatement Decision Report

This project falls under the Type III project category of 23CFR772.7 in the Traffic Noise Analysis Protocol dated April 2020. Per the Traffic and Noise Analysis Protocol, “Type III projects do not require noise analysis”, thus the proposed project is exempt. Hence, noise studies are not anticipated.

6I. Life-Cycle Cost Analysis

Life-Cycle Cost Analysis (LCCA) will not be required, per the LCCA Procedures Manual dated August 2013 (Section 1.4), since no permanent pavement work is involved in the project scope.

6J. Reversible Lanes

This project does not qualify as a capacity increasing or a major street or highway realignment project and reversible lanes have not been considered.

7. OTHER CONSIDERATIONS AS APPROPRIATE

Public Hearing Process

Caltrans has worked closely with the California Department of Fish and Wildlife (CDFW) and Oregon State University (OSU) to determine the best locations for these proposed wildlife overcrossings. Further coordination with the BLM, United States Fish and Wildlife Service (USFWS), and local conservation groups including but not limited to The Nature Conservancy, the Society for the Conservation of Bighorn Sheep, and the Mojave Desert Land Trust is anticipated.

Based on the outcome of the environmental process and lack of public controversy, the formal public hearing process was not required for the project. However, Caltrans, CDFW, and BLW have been continuing to conduct monthly stakeholder outreach meetings since April 12, 2023 to engage various federal and Non-Government Organization (NGO) stakeholders including the National Parks Conservation Association, the California Chapter Wild Sheep Foundation, the Defenders of Wildlife, the Mountain Lion Foundation, the Mojave National Preserve Conservancy, the NPS, and the BLM. As part of the stakeholder outreach process, Caltrans has set up a project website to further engage and provide updates to agencies, the public, and other interested parties. The NPS has voiced support for the overall wildlife crossing effort and Caltrans initiated consultation with seven Native American Tribes/organizations on March 6, 2023.

Route Matters

The proposed improvements on this project for I-15 do not create any new connections or permanent closures of existing local roads. Consent from the California Transportation Commission is not required for a new public road connection.

Permits

The project will require a CDFW/CFGC Section 1602 permit, a USACE/CWA Section 404 Nationwide Verification, and a RWQCB/CWA Section 401 permit. Compensatory mitigation will be required to mitigate impacts on jurisdictional waters. Avoidance and minimization measures will be required to avoid potential impacts to other federally listed as ‘threatened’ or ‘endangered’ species or State candidate rare, threatened, or endangered species.

Cooperative Agreements

Senate Bill 145 was signed by the Governor on July 10, 2023, adding Section 143.2 to the Streets and Highway Code, and authorizing the Department to enter into an agreement with a rail entity undertaking an intercity passenger rail construction project within the right-of-way of Route 15 to develop and construct this wildlife crossing concurrently with the rail construction project. Consequently, an agreement is

anticipated between the Brightline West (BLW) high-speed rail project and the Department to authorize BLW to construct the wildlife crossings.

Other Agreements

It is anticipated that CDFW will require access to the wildlife crossings to maintain and operate wildlife monitoring equipment (cameras, etc.) on or near the crossings within State R/W to monitor the utilization of the crossings by wildlife. This will require a maintenance agreement between CDFW and the Department.

Report on Feasibility of Providing Access to Navigable Rivers

There are no navigable waterways found within project limits.

Public Boat Ramps

There are no boat ramps found within project limits.

Transportation Management Plan

A Transportation Management Plan (TMP) Data Sheet was prepared on April 12, 2023 (Attachment L) to minimize traffic impacts and delays during construction. TMP elements include Public Information/Public Awareness Campaign, Motorist Information Strategies, and Incident Management and Construction Strategies. The cost of the TMP elements is estimated at \$580,000 and is included in the capital cost.

Stage Construction

The Stage Construction Plan shows the sequence of construction activities. In addition, the contract plans may identify portions of the project to be completed in a specific sequence to minimize impacts to the traveling public.

The basic construction staging strategy is to construct a temporary roadway in the median for detouring traffic. To reduce the number of traffic shifts, four temporary stages of construction will be used to minimize impacts on the traveling public. Stage 1 includes building a portion of the wildlife crossing structure and foundation within the median. Stage 2 includes the construction of the temporary detour pavement in the median. Stage 3 includes the construction of the southbound span of the structure while southbound traffic is shifted to the temporary median pavement. Stage 4 includes the construction of the northbound span of the structure while northbound traffic is shifted to the temporary median pavement. BLW will use the Lane Requirement Charts provided in the Contract and Caltrans Standard Plans for the traffic control requirements. Installation of mandatory speed reduction signs will also be implemented for all stages of construction.

At the Clark Mountain location, it is anticipated that BLW will construct a bridge in the median over Clark Mountain Ditch as part of their project (EA 08-0P400) prior to the construction of the wildlife crossing at this location. This bridge will then be utilized in conjunction with the median detour to manage traffic at this location. After the wildlife crossing construction, BLW will complete the construction of their rail line on the new bridge over Clark Mountain Ditch.

Detailed stage construction and temporary traffic handling and detour plans will be produced during the design phase.

Accommodation of Oversize Loads

Within the project limits, the portion of the I-15 from PM R114.0 to PM 171.5 is not an Extralegal Load Network (ELLN) route. The proposed improvements may have some impacts during construction on existing passage for vehicles of unrestricted height while moving in and out of the area, and to or from ultimate destinations. Therefore, the accommodation of oversize loads needs to be considered in stage construction for this project.

Graffiti Control

The following measures will be implemented during design, where feasible, as a deterrent to graffiti:

- Avoidance of smooth surfaces, where feasible.
- Use of stain and aesthetics.
- Fencing and locked gates to prevent unauthorized access to the wildlife crossing bridge deck.

Asset Management

The performance measures for this project in the Project Initiation Document (PID) phase are as follows:

Other Assets:

Performance Measure: SHOPP Miscellaneous (Bridge)

Unit	Quantity
Each	3

There is no difference in the performance measures listed above and the performance measures included in the Asset Management Tool Printout attached to the PIP.

The Pre-PID and Post-PID Asset Management Tool Performance Measures are attached to this report (Attachment F).

Complete Streets

This project is exempt from further Complete Streets evaluation. A Complete Streets Decision Document (CSDD) has been revalidated for this project (Attachment I).

Climate Change Considerations

Greenhouse Gas (GHG) Reduction Measures

This project is a non-capacity-increasing project. This type of project generally causes minimal or no increase in operational GHG emissions.

The project will not add capacity to or change the operations of the existing transportation system. No impacts to operational emissions are anticipated. The project will generate emissions due to construction. A Project Construction GHG Emissions Estimate was developed on September 8, 2023. Cal-CET air modeling software was used to estimate construction and Greenhouse gas (GHG) emissions. The GHG for construction emissions on-road/offsite operations has been estimated as 12.34 tons of Carbon Dioxide Equivalent (CO₂e) per day of construction activity. Total Estimated Construction Emissions from the completed project (310 days) is estimated as 3,084 tons of CO₂e.

Best management practices (BMPs) will be implemented to minimize the amount of greenhouse gases emitted during construction. The project would not affect the resilience of the transportation system to flooding, wildfires, or sea level rise. No climate change impacts are anticipated.

Construction emissions are unavoidable but will be reduced to the extent possible through planning and implementation of best practices throughout the project delivery process. Strategies for reducing GHG emissions, if appropriate, include salvaging guardrail, reducing roadway construction waste, applying fuel-efficient measures for both construction equipment and traffic management during delays or detours, using energy and water-efficient construction methodologies, and recommending that material within a local radius of the project area and/or locally available building material be utilized.

Adaptation Measures

The proposed project site is not located within the coastal zone or an area prone to sea level rise. The Caltrans District Vulnerability Assessment demonstrates the impact climate change could have on transportation facilities, including wildfire vulnerability, temperature stresses, and precipitation quantities. In the three proposed areas for wildlife crossings, studies indicate no wildfire vulnerabilities through 2070. Temperatures are forecasted to rise by 8-13%, and precipitation is expected to increase by 0-4.9%. Adaptation measures are not anticipated to be required in the overcrossing areas.

Broadband and Advance Technologies

Although no broadband and advance technologies are planned in this project, the proposed improvements will not impact the ability to include broadband and advanced technologies such as wired broadband facilities in the future.

8. FUNDING, PROGRAMMING, AND ESTIMATE

Funding

It has been determined that this project is eligible for federal-aid funding.

This project was amended into the 2022 SHOPP under the 20.XXX.201.999 – SHOPP Miscellaneous. The table below reflects the funding breakdown between Caltrans, BLW, and CDFW.

Capital & Support Cost (\$1,000s)			
Component	(A) Total IIJA (Caltrans)	(B) Total Contribution (BLW / CDFW)	(C) Grand Total (A+B)
PA&ED	4,500		4,500
PS&E	6,700		6,700
Right-of-Way	180		180
Construction	15,780		15,780
Total Support	27,160	33,000	60,160
Right-of-Way	652		652
Construction	71,583	20,000	91,583
Total Capital	72,235	20,000	92,235
Grand Total	99,395*	53,000**	116,053

**Programmed under IIJA funds*

***The sum of the contribution from Brightline West and the California Department of Fish and Wildlife per grant agreement*

The Agreement to Implement Wildlife Overcrossings Over I-15 was signed on January 11, 2023, by BLW, CDFW, and Caltrans (Attachment N). An agreement between Caltrans and BLW to define the roles and responsibilities between the parties is anticipated to be executed by June 30, 2024.

Programming

It is requested that the following escalated dollars for each phase be programmed.

Fund Source	Current Estimate	Escalated Estimate			Total Escalated Estimate	Programmed Amount	BLW / CDFW	Escalated Estimate Difference from Programmed
20.XX.201.121		23/24	24/25	25/26				
Component	In Thousands of Dollars (\$1,000)							
PA&ED	\$4,500	\$4,500			\$4,500	\$4,500		
PS&E	\$3,000		\$3,000		\$3,000	\$6,700		-\$3,700
ROW	\$180		\$180		\$180	\$180		
Const.	\$4,500		\$4,500		\$4,500	\$15,780		-\$11,280
Total Support	\$12,180	\$4,500	\$7,680		\$12,180	\$27,160	\$33,000*	-\$14,980
ROW	\$652		\$652		\$652	\$652		
Const.	\$80,061		\$84,064		\$84,064	\$71,583	\$20,000**	-\$7,519
Total Capital	\$80,713		\$84,716		\$84,716	\$72,235	\$20,000	-\$7,519
Grand Total	\$92,893	\$4,500	\$92,396		\$96,896	\$99,395		-\$22,499

* Brightline West in-kind contribution towards design activities

** CDFW contribution towards construction capital per grant agreement # Q2396066

Estimate

The estimated construction cost is \$80,061,000 and the estimated R/W cost is \$651,200. See the Preliminary Cost Estimate for a breakdown of construction cost (Attachment C) and the Right of Way Data Sheet for the R/W cost (Attachment H).

9. DELIVERY SCHEDULE

Project Milestones		Milestone Date (Month/Day/Year)	Milestone Designation (Target/Actual)
PIP		08/31/2022	Actual
PID	M010	06/05/2023	Actual
BEGIN ENVIRONMENTAL	M020	06/01/2023	Actual
PA & ED	M200	06/14/2024	Target
PROJECT PS&E	M380	12/01/2024*	Target
RIGHT-OF-WAY CERTIFICATION	M410	09/01/2024	Target
READY TO LIST	M460	09/01/2024	Target
HEADQUARTERS ADVERTISE	M480	09/01/2024	Target
AWARD	M495	10/01/2024	Target
APPROVE CONTRACT	M500	01/01/2025	Target
CONTRACT ACCEPTANCE	M600	10/01/2026	Target
END PROJECT	M800	10/28/2027	Target
FINAL VOUCHER	M900	09/12/2028	Target

*The above schedule assumes a design-build procurement.

10. RISK

A certified risk register (Attachment D) describes potential risk and opportunity items identified for the proposed project. The risk register was certified on August 31, 2023, and the following is a summary of the risks that should be monitored and updated during the project development phases:

- If the arch type structure could meet the California Department of Transportation (Caltrans) seismic design criteria, there might be cost and schedule savings.
- If Brightline West will be authorized to procure the project, there could be support cost and schedule savings opportunity.
- The requirements for wildlife monitoring equipment (cameras, etc.) on the structures are unknown at this time. This may result in a capital cost increase.
- If it is determined that protected Waters of the State or Waters of the US are found in the project footprint of the over crossings, then a 404, 401, and 1600 may be required which may require additional measures and mitigation. This may increase the project's cost and delay the schedule.
- A Consent-To-Common-Use (CCUA) needs to be designated for AT&T at the Clark Mountain location. If the AT&T and/or SCE facilities at this location need to be relocated, new easement rights will need to be acquired for these utilities. This may result in cost increase and schedule delay.
- If the BLW project gets delayed due to funding or other reasons, this may impact the schedule of this project and may result in schedule delay.
- Water supply for construction may be difficult to obtain. This may affect the cost and schedule.
- The crossing sites are at remote locations and may not have easy access to import materials. The need to import materials may also increase costs and delay the schedule.
- Aesthetics for the structures has not yet been well defined. This may result in cost increase and schedule delays.
- Due to insufficient subsurface information, there may be unforeseen geotechnical conditions at the site and the foundation design may change based on the geotechnical report. This change may lead to a cost increase and a schedule delay.
- Due to uncertainty of the soil contamination levels within the project limits, a detailed site investigation (DSI) was conducted in July 2023. If the DSI identifies concentrations of Aerially Deposited Lead (ADL) and/or other contaminants above

regulated thresholds, proper handling and disposal of soil may be required. This would impact project cost and schedule.

- As a result of 3 months in the schedule for R/W, we may not be able to secure the necessary right from BLM, which may delay the Ready to List (RTL).
- If a desert tortoise (DT) or other special-status species protected under the California Endangered Species Act (CESA) is detected within the project area, then construction work may have to be stopped until the animal moves on its own accord out of the project area; otherwise, a 2081 permit will be required from California Department of Fish & Wildlife (CDFW). This may increase both capital and support costs and delay the project schedule.
- If rare plants are found within the Project footprint, then Environmental Sensitive Area (ESA) temporary high visibility fencing and associated no-work zone would be placed around rare plants. A subsequent relocation plan may be required. Both actions may delay Project construction and increase cost.
- If the Monarch butterfly becomes federally listed in the Endangered Species List in 2023/2024, then this listing may require a reevaluation, additional technical studies, USFWS Section 7 Consultation, and mitigation. This may impact project schedule and cost.
- If Caltrans' CEQA Statutory Exemption Restoration Project (SERP) application is denied, then the project will not be eligible for statutory exemption and a 2081 permit may be required. This may delay project schedule and increase the cost.

11. EXTERNAL AGENCY COORDINATION

Federal Highway Administration (FHWA)

This PR was reviewed by Caltrans' FHWA Liaison, Sergio Avila, on 12/13/2023 and this project is eligible for federal-aid funding.

Per the current Joint Stewardship and Oversight Agreement between Caltrans and FHWA, dated May 28, 2015, this project is considered a Delegated Project. However, should any future situation/circumstance that will potentially classify the project for Risk-based Project Involvement (RBPI), Caltrans shall notify FHWA. FHWA will reassess this project to determine if it is selected for RBPI and identify the specific FHWA involvement activities.

FHWA and Caltrans conducted a meeting on March 15, 2023, to provide FHWA an overview of the work being done to construct wildlife crossings, and to give an opportunity for comments, especially about any special coordination that FHWA may deem necessary. From this meeting, FHWA suggested for Brightline West to sponsor the bridges. It was concluded that Caltrans will control the environmental process and

the proposed locked gates will require approval from FHWA. The funding will be requested through the California Transportation Commission (CTC) and the funding source is SHOPP from the IJA.

12. PROJECT REVIEWS

Scoping team field review attendance roster attached		Attachment P
Scoping team field review	PDT	Date: 8/17/2023
Headquarters Project Delivery Coordinator	Amy Fong	Date: 11/21/2023
Project Manager	Nader Naguib	Date: 12/21/2023
District Design Liaison/FHWA/ADA	Sergio Avila	Date: 12/13/2023
District Design Safety	Jason Collado	Date: 11/16/2023
District Environmental Planner	Andrew Walters	Date: 11/17/2023
Headquarters Senior Bridge Engineer	Feiruz Abera	Date: 11/16/2023

13. PROJECT PERSONNEL

Name	Title	Functional Unit	Phone Number
Nader Naguib	Project Manager	Project Management	909-665-3482
Tuan Truong	Office Chief	Design	909-501-5875
Christine Senteno	Office Chief	Right-of-Way	909-693-9087
Al Ehieze-Okeke	Associate Right-of-Way Agent	Right-of-Way	909-518-4090
Maria Hamlett	Permit Coordinator	Environmental	909-472-1035
Ronn Knox	Environmental Planner	Environmental	909-261-5171
Yong Kim	District Truck Services Manager	Traffic Operations	909-383-6309
Feiruz Abera	Senior Bridge Engineer	Division of Engineering Services	909-455-8309
Md Shaheed	Risk Coordinator	Project Management	909-383-5953
Aung Naing	Office Chief	Design – Traffic	909-518-8559
Siva	Office Chief	Traffic Operations – COS	909-255-2368
Sivakkolunthar			
Ihab Boulos	Office Chief	Constructability	909-383-2565
Greg Clark	Office Chief	Storm Water Quality	909-693-0365
Sergio Avila	District Design Liaison/FHWA/ADA	Design	909-383-1554
Max Auyeung	Office Chief	UEW	909-806-3203
Armando Salvador	District Traffic Manager	Transportation Management Plans	909-520-5337
Jonathan Den Hartog	Design Manager	Design	909-665-3742
Sittampalam	Office Chief (Acting)	Materials Engineering	213-605-5538
Sathiskumar			
Steven Magallanes	Office Chief	Landscape Architecture	909-518-7809

14. ATTACHMENTS

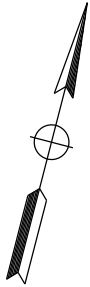
- A. Location Map (1)
- B. Layout and Typical Cross Section (3)
- C. Project Cost Estimate (11)
- D. Risk Register Certification (6)
- E. Project Initiation Proposal Signatures (1)
- F. Pre-PID and Post-PID Asset Management Tool Performance Measures Output Printouts (2)
- G. Transportation Planning Scoping Information Sheet (TPSIS) (17)
- H. Right-of-Way Data Sheet (11)
- I. Complete Streets Decision Document (CSDD) (5)
- J. CEQA Exemption / NEPA Categorical Exclusion Determination Form (47)
- K. Long Form Storm Water Data Report (1)
- L. Transportation Management Plan (TMP) Data Sheet (5)
- M. Initial Site Assessment (ISA) Checklist (1)
- N. Agreement to Implement Wildlife Overcrossings Over Interstate 15 (12)
- O. Project Category Assignment (1)
- P. Joint Field Visit Sign-In Sheet (1)
- Q. Structure Preliminary Geotechnical Report (107)
- R. Value Analysis Study Summary Report (7)
- S. Visual Impact Assessment Simulation (1)

Attachment A

LOCATION MAP

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN SAN BERNARDINO COUNTY
NEAR BAKER
AT VARIOUS LOCATIONS

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2023



LOCATIONS OF CONSTRUCTION

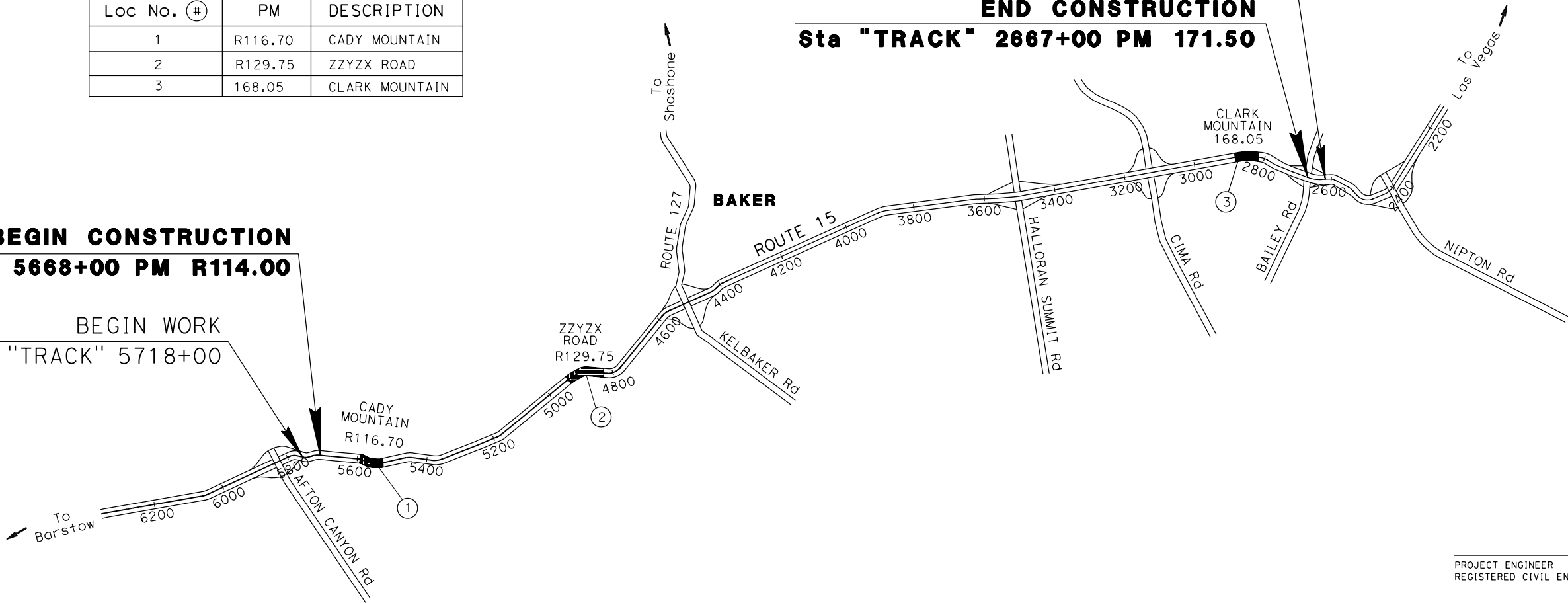
Loc No. (#)	PM	DESCRIPTION
1	R116.70	CADY MOUNTAIN
2	R129.75	ZZYZX ROAD
3	168.05	CLARK MOUNTAIN

BEGIN CONSTRUCTION
Sta "TRACK" 5668+00 PM R114.00

BEGIN WORK
Sta "TRACK" 5718+00

END WORK
Sta "TRACK" 2617+00

END CONSTRUCTION
Sta "TRACK" 2667+00 PM 171.50



PROJECT MANAGER	NADER NAGJIB
DESIGN MANAGER	JONATHAN DEN HARTOG

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES)
OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

PROJECT ENGINEER
REGISTERED CIVIL ENGINEER

DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS
OFFICERS OR AGENTS SHALL NOT BE
RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

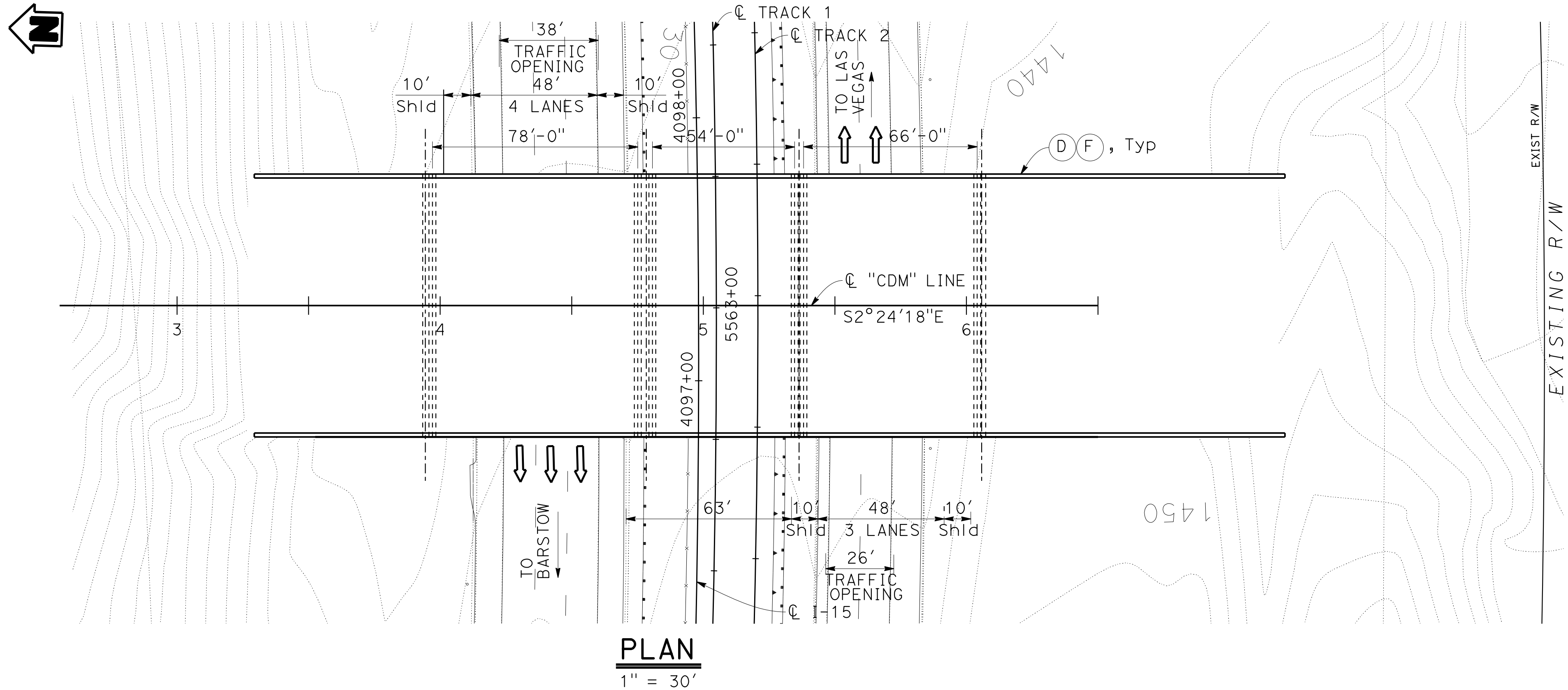
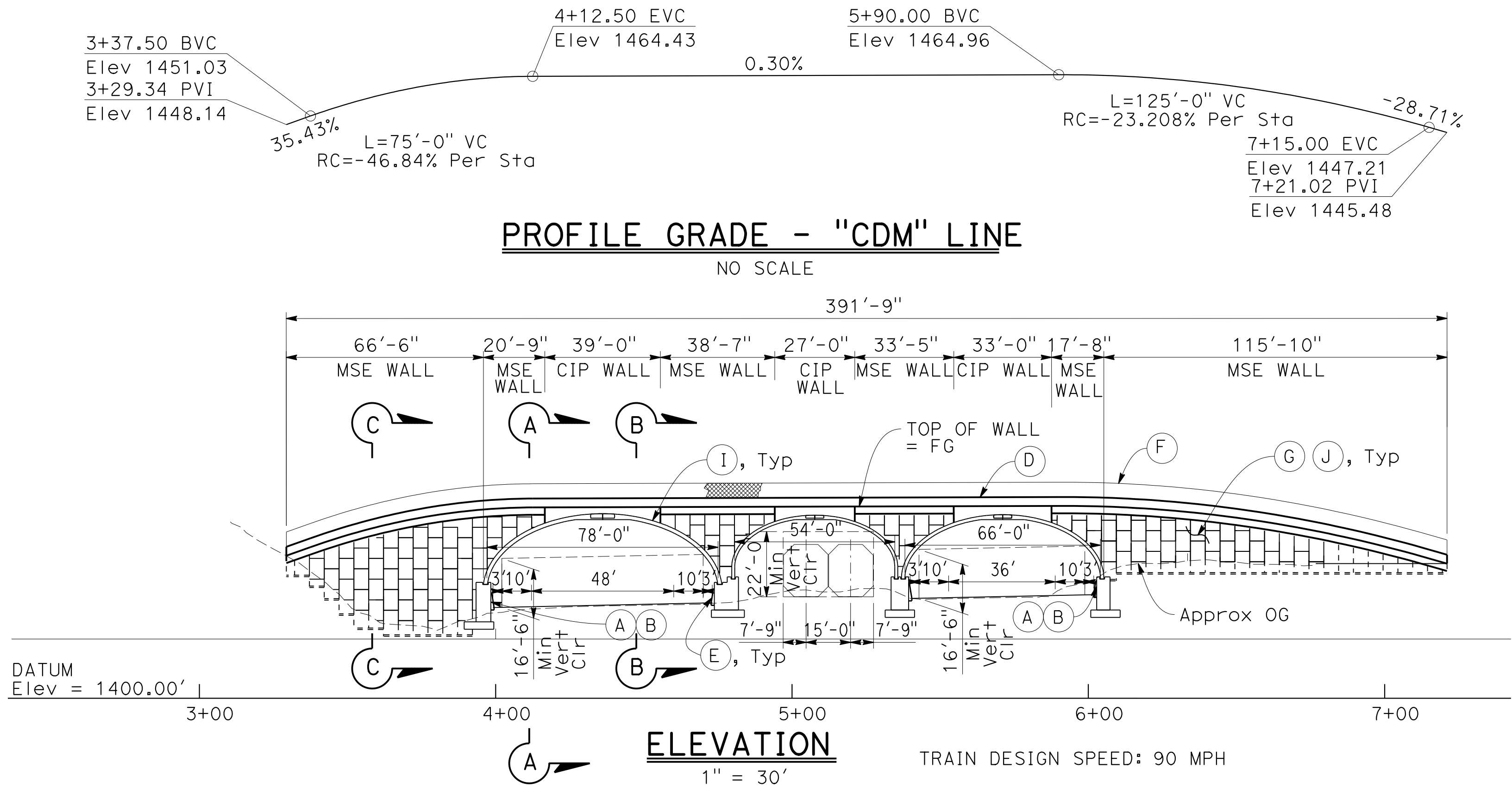


CONTRACT No.	08-1N5904
PROJECT ID	0823000021

Attachment B

LAYOUT AND TYPICAL CROSS SECTION

Dist	COUNTY	ROUTE	POST MILE

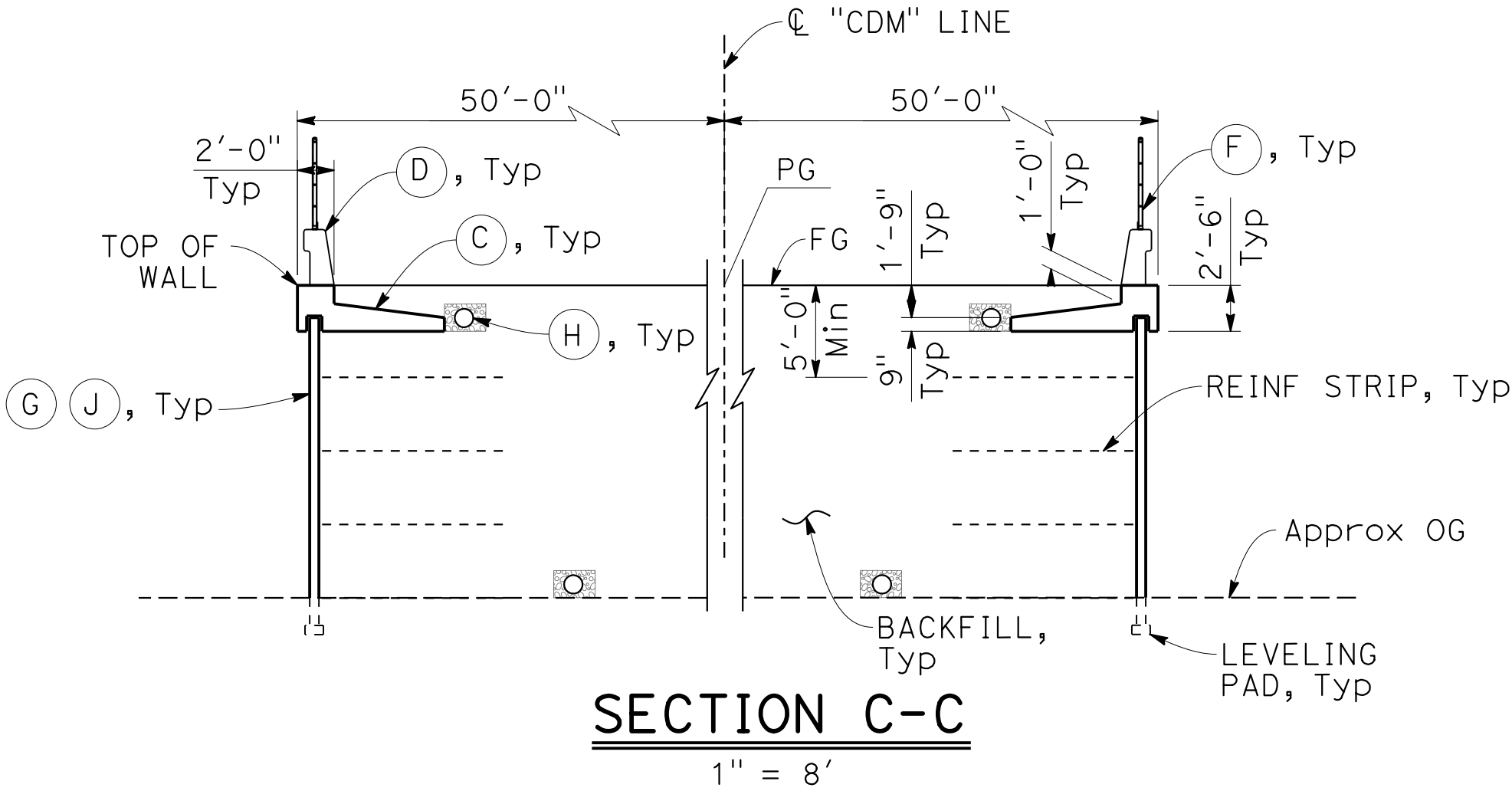
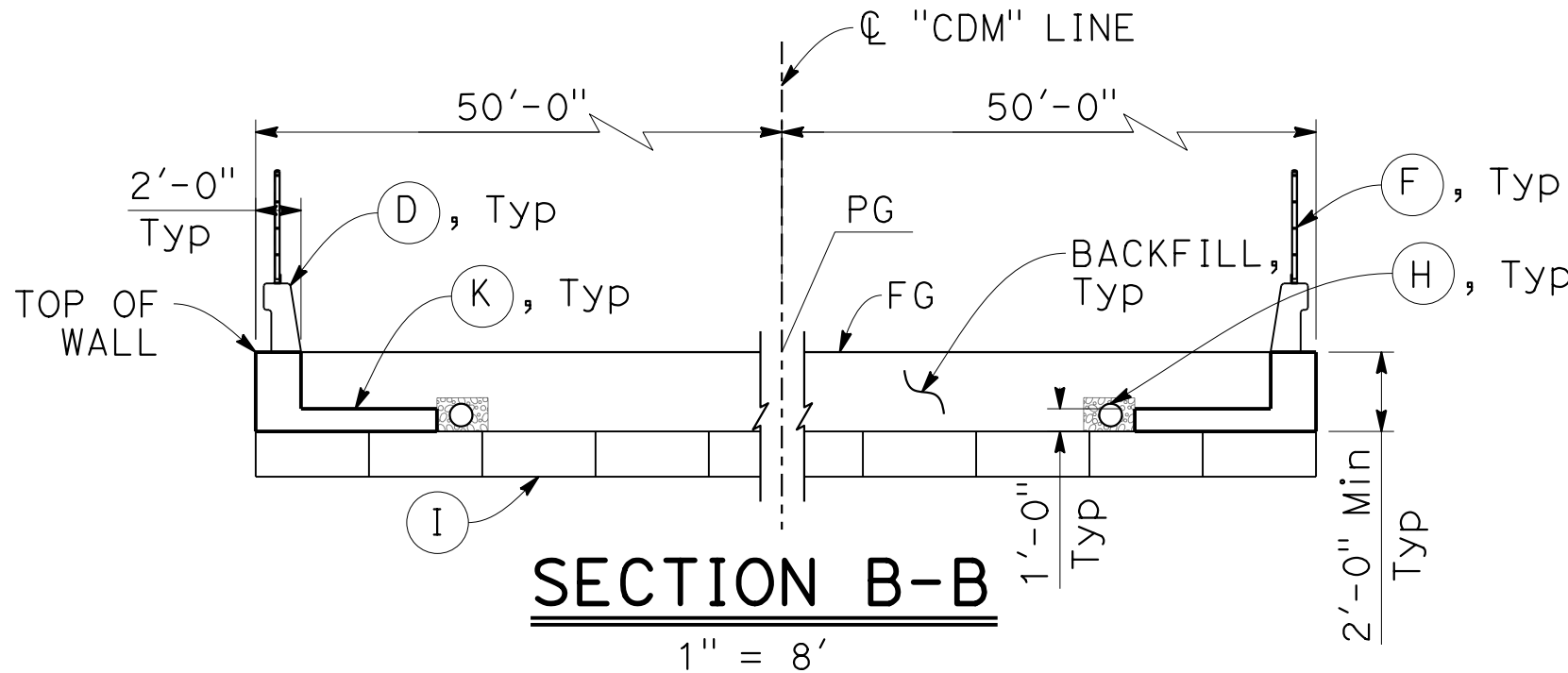
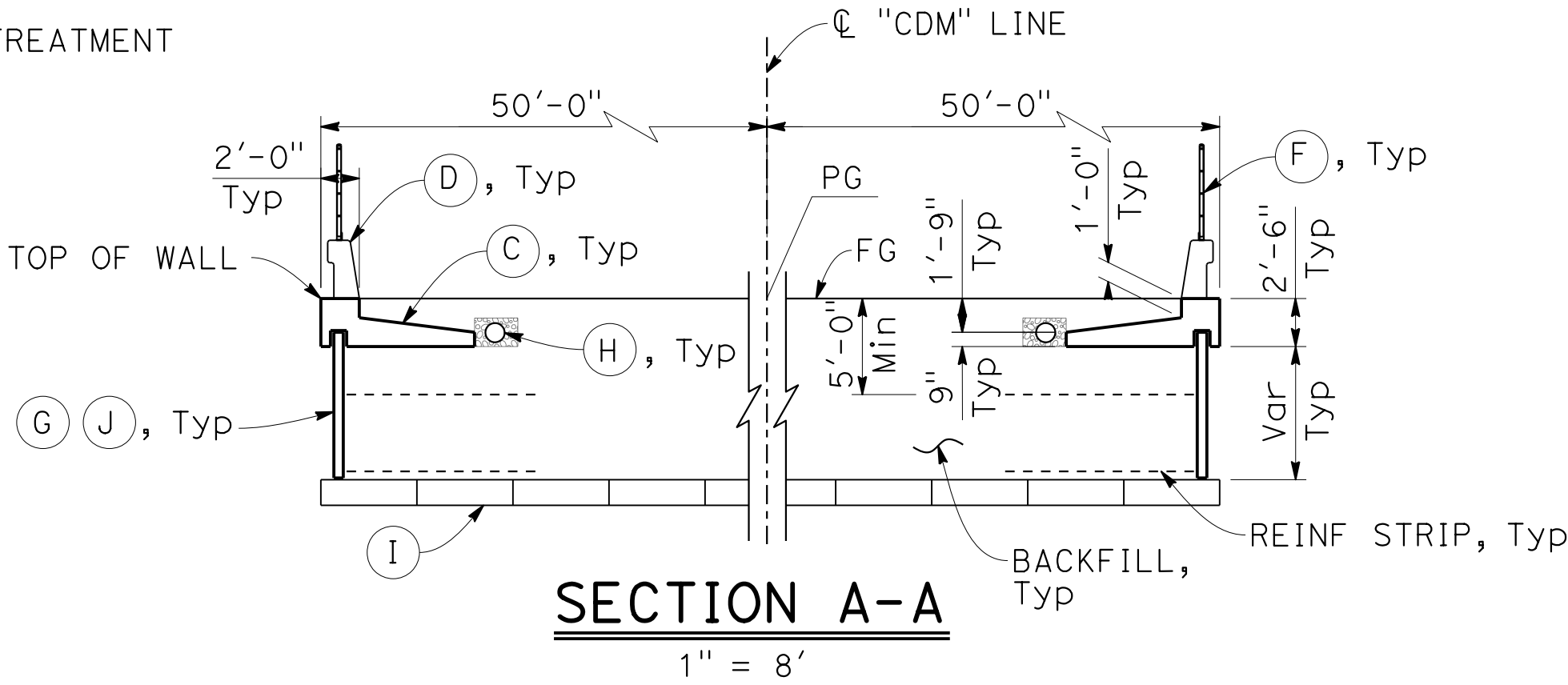


LEGEND:

- ➡ Direction Of Traffic
- ⊙ Point Of Minimum Vertical Clearance over I-15 Traffic
- ⊙ Point Of Minimum Vertical Clearance over Track
- Concrete Barrier
- Thrie Beam

NOTES:

- (A) Paint "CADY MT WILDWIFE OVERCROSSING"
- (B) Paint "Bridge No. 54-XXX" and "Year Constructed"
- (C) MOMENT SLAB
- (D) Concrete Barrier (Type 836)
- (E) CONCRETE BARRIET (TYPE 60MGF)
- (F) 5'-0" Protection Fence
- (G) ARCHITECTURAL TREATMENT
- (H) UNDERDRAIN
- (I) PRECAST ARCH
- (J) MSE PANELS
- (K) CIP WALL



DESIGNED BY J. Wang	DATE
DRAWN BY L. Zhang	DATE
CHECKED BY	DATE
APPROVED	DATE

Y. Nien Wang PROJECT ENGINEER

CADY MT WILDLIFE OVERCROSSING	
GENERAL PLAN	
BRIDGE No.:	
PROJECT EA:	PROJECT No. & PHASE:

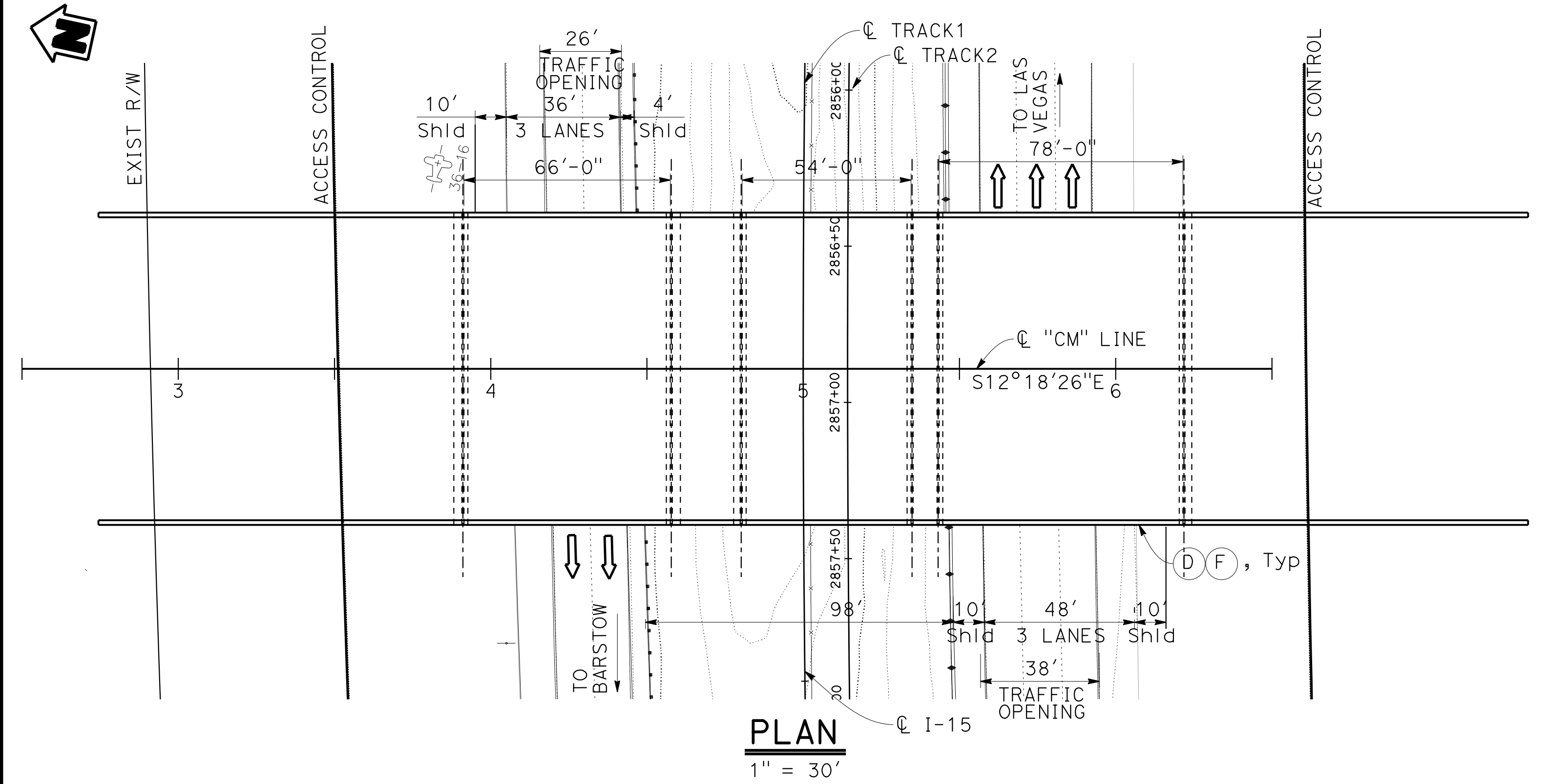
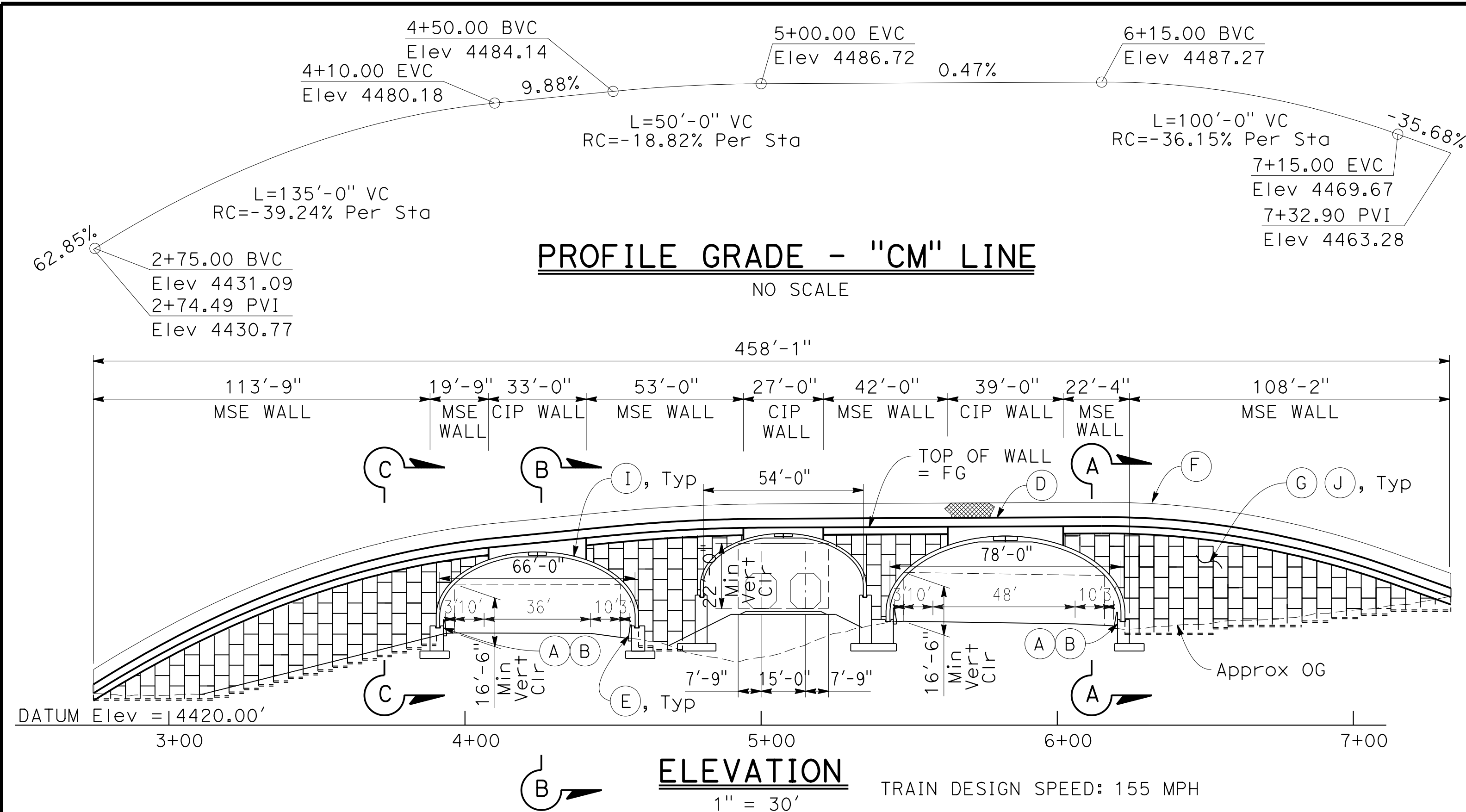
DESIGN OVERSIGHT

SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET
(ENGLISH) (REVISION 8/16/2021)

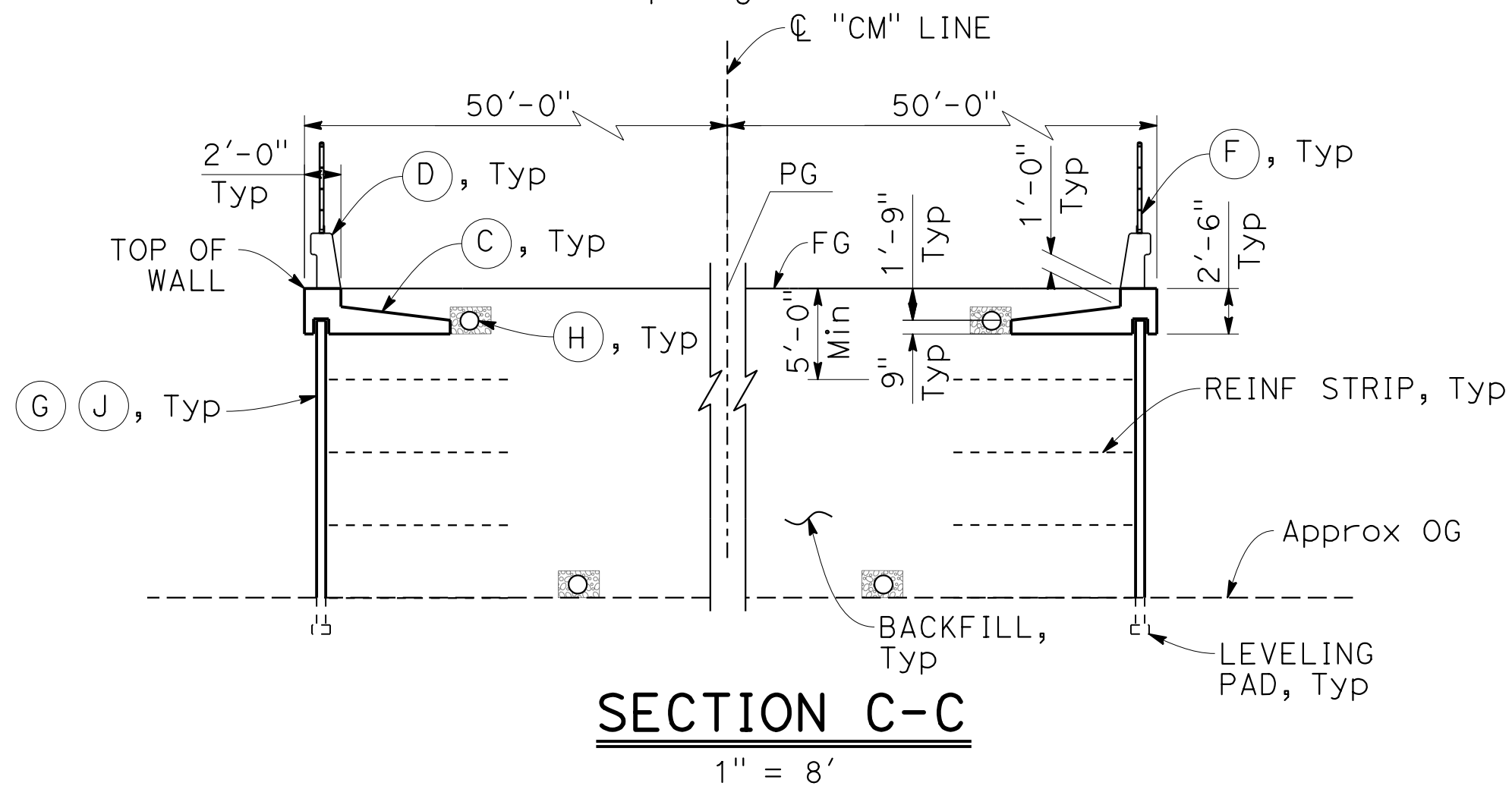
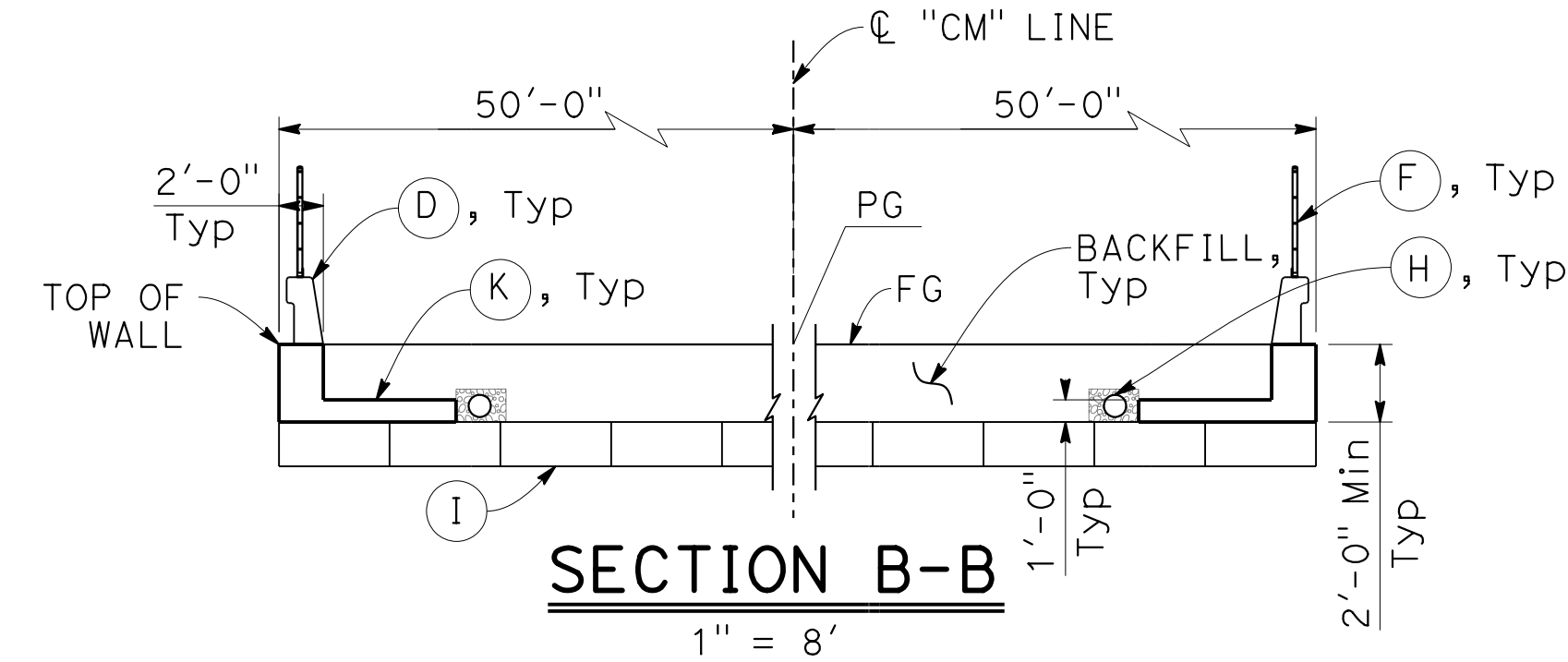
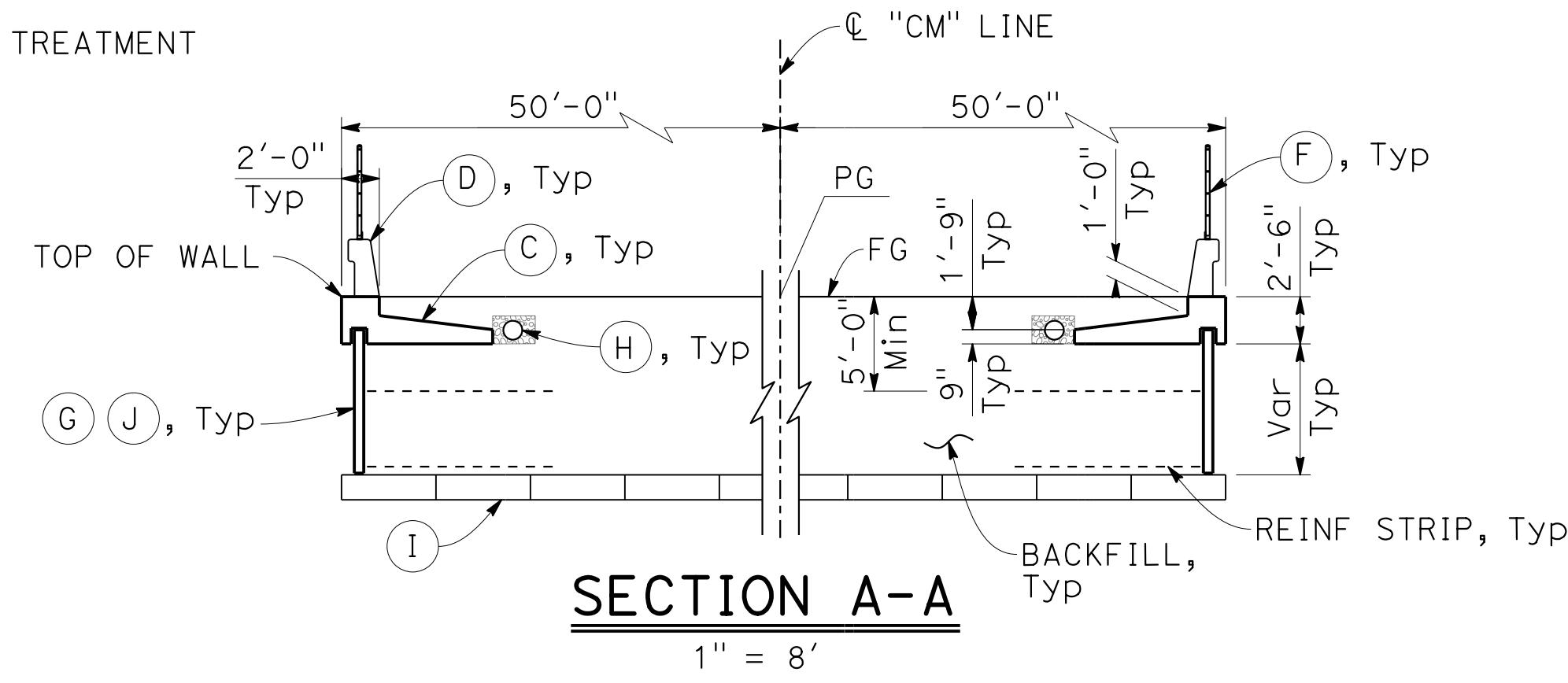
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TIME PLOTTED => 14:50
USERNAME => lizhang



- LEGEND:**
- Direction Of Traffic
 - Point Of Minimum Vertical Clearance over I-15 Traffic
 - Point Of Minimum Vertical Clearance over Track
 - Concrete Barrier
 - Thrie Beam

- NOTES:**
- (A) Paint "CALRK MT WILDWIFE OVERCROSSING"
 - (B) Paint "Bridge No. 54-XXX" and "Year Constructed"
 - (C) MOMENT SLAB
 - (D) Concrete Barrier (Type 836)
 - (E) CONCRETE BARRIET (TYPE 60MGF)
 - (F) 5'-0" Protection Fence
 - (G) ARCHITECTURAL TREATMENT
 - (H) UNDERDRAIN
 - (I) PRECAST ARCH
 - (J) MSE PANELS
 - (K) CIP WALL



DESIGN OVERSIGHT
SIGN OFF DATE

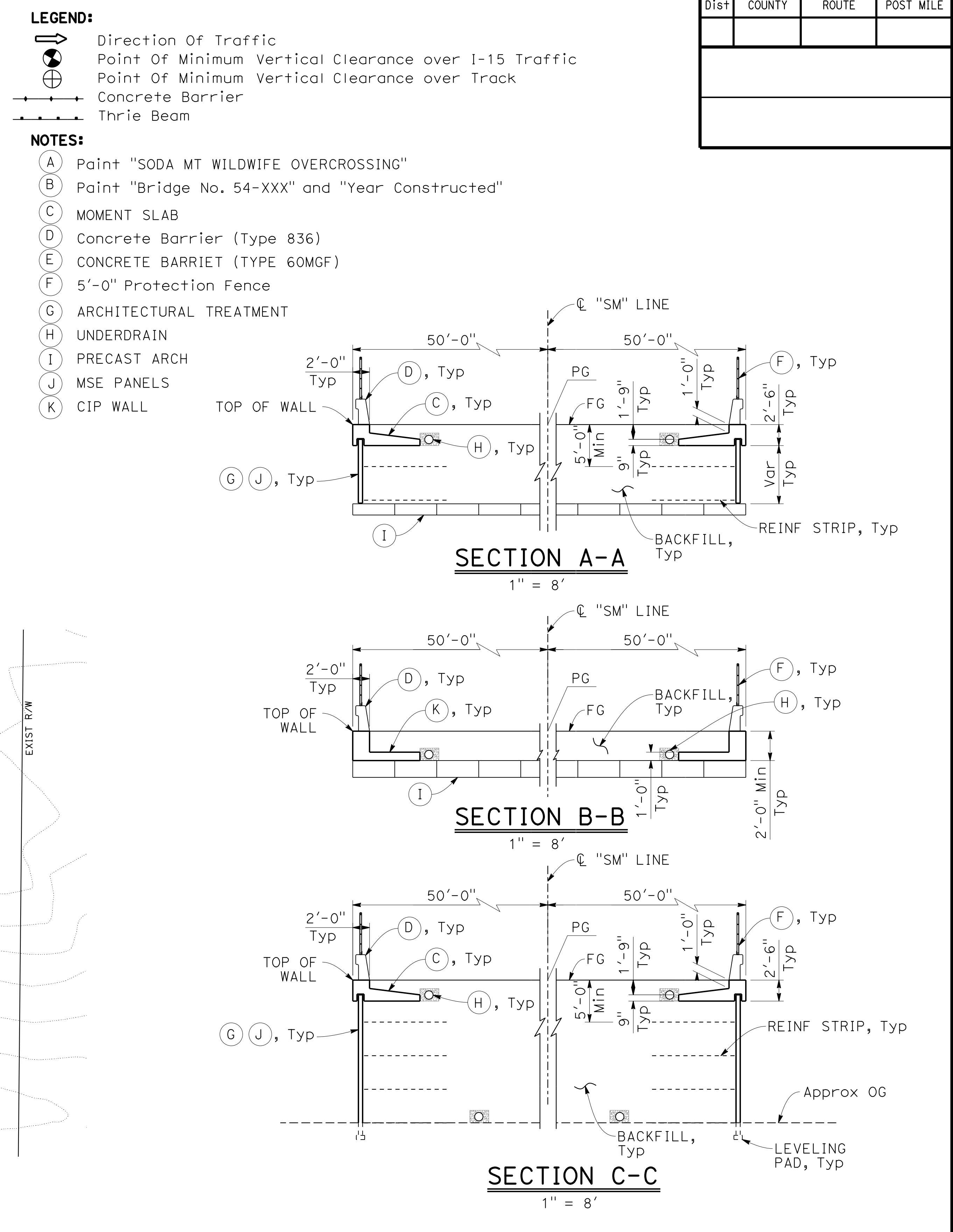
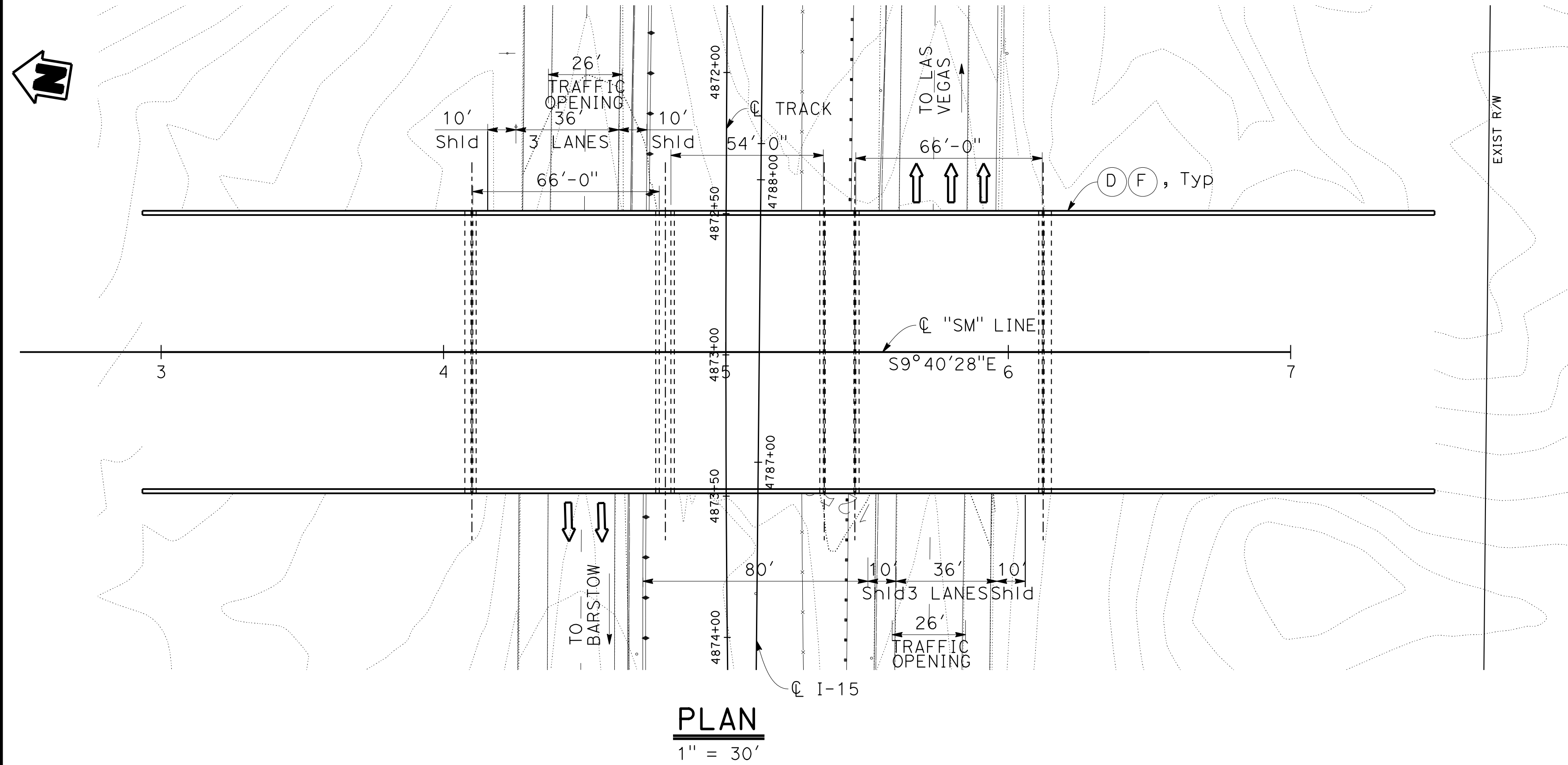
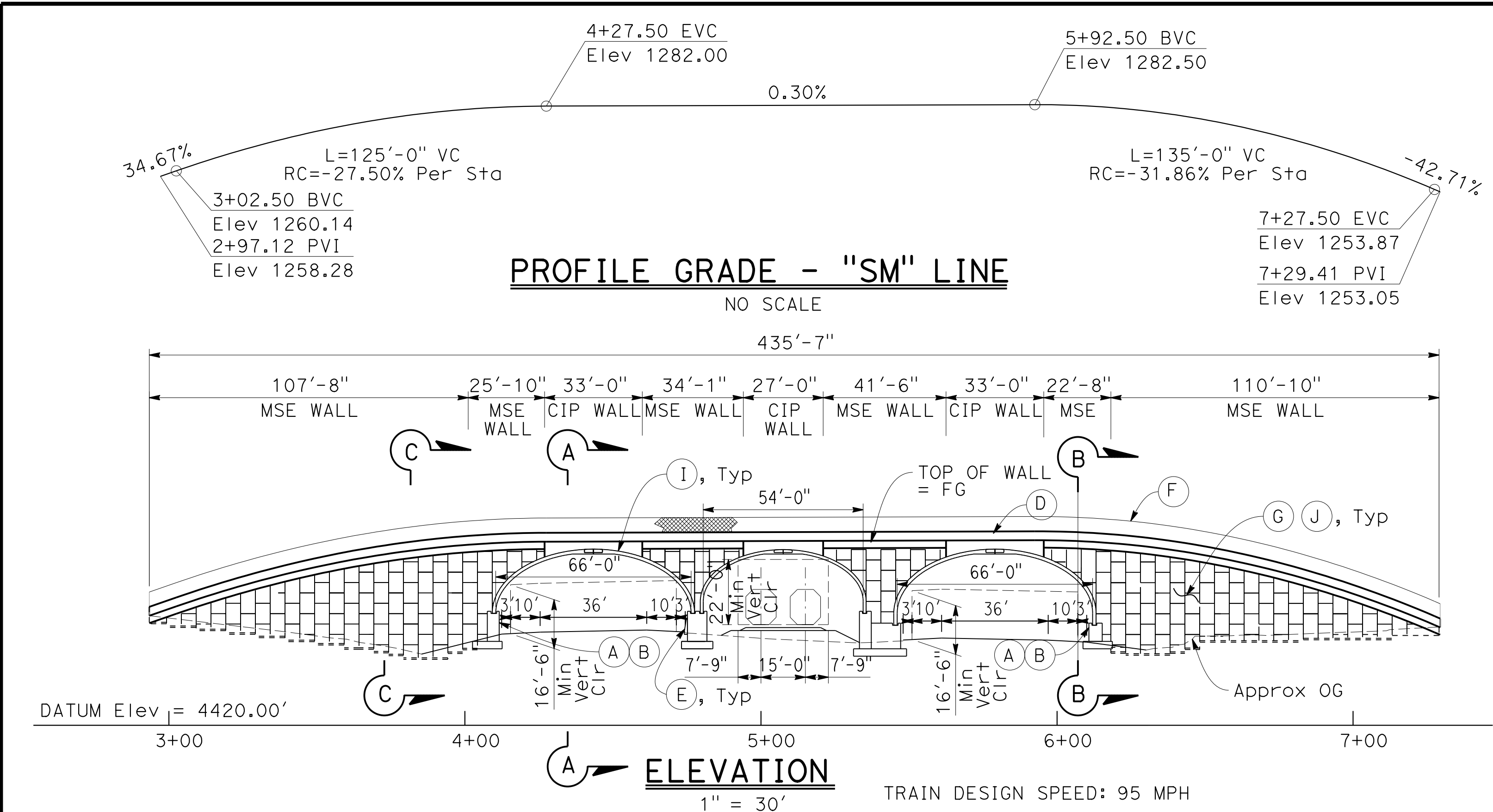
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(ENGLISH) (REVISION 8/16/2021)

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FILE => 54-Clark-a-gpTSR.dgn
TIME PLOTTED => 15:29
USERNAME => lzhang

DESIGNED BY J. Wang	DATE
DRAWN BY L. Zhang	DATE
CHECKED BY	DATE
APPROVED	DATE

Y. Nien Wang
PROJECT ENGINEER

CLARK MT WILDLIFE OVERCROSSING	
GENERAL PLAN	
BRIDGE No.:	
PROJECT EA:	PROJECT No. & PHASE:



DESIGN OVERSIGHT
SIGN OFF DATE

ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 8/16/2021)	DATE PLOTTED => 21-MAY-2024 FILE => 54-Soda-a-gpTSR.dgn	TIME PLOTTED => 15:28 USERNAME => lizhang
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DESIGNED BY J. Wang	DATE
DRAWN BY L. Zhang	DATE
CHECKED BY	DATE
APPROVED	DATE

Y. Nien Wang PROJECT ENGINEER

SODA MT WILDLIFE OVERCROSSING	
GENERAL PLAN	
BRIDGE No.:	
PROJECT EA:	PROJECT No. & PHASE:

Dist	COUNTY	ROUTE	POST MILE

Attachment C

PROJECT COST ESTIMATE

PROJECT
PRELIMINARY COST ESTIMATE©

EA: 1N590

EA: 1N590 PID: 0823000021

PID: 0823000021

District-County-Route: 08-SBD-15

PM: R114.0/171.5

Type of Estimate : PR

Program Code : 20.XXX.201.999

Project Limits : 2.4 miles north of Afton Road Overcrossing to 0.1 mile north of Bailey Road Overcrossing

Project Description: This project is located along Interstate 15 (I-15) from Post Mile (PM) R114.0 to PM 171.5. It is proposed to construct vegetated wildlife crossings and fencing in the Mojave Desert at three locations along I-15 near Cave Mountain (PM R116.70), Soda Mountain (PM R129.75), and Clark Mountain (PM 168.05).

Scope : Construct vegetated wildlife crossings and fencing in the Mojave Desert at three locations along I-15 near Cave Mountain (PM R116.70), Soda Mountain (PM R129.75), and Clark Mountain (PM 168.05).

Alternative : Alternative # 1

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 43,463,100	\$ 46,753,691
TOTAL STRUCTURES COST	\$ 30,962,400	\$ 33,306,563
SUBTOTAL CONSTRUCTION COST	\$ 74,426,000	\$ 80,061,000
TOTAL RIGHT OF WAY COST	\$ 651,200	\$ 651,200
TOTAL CAPITAL OUTLAY COSTS	\$ 75,078,000	\$ 80,713,000
PA/ED SUPPORT	\$ 4,500,000	\$ 4,500,000
PS&E SUPPORT	\$ 3,000,000	\$ 3,000,000
RIGHT OF WAY SUPPORT	\$ 180,000	\$ 180,000
CONSTRUCTION SUPPORT	\$ 4,500,000	\$ 4,500,000
TOTAL SUPPORT COST	\$ 12,180,000	\$ 12,180,000
TOTAL PROJECT COST	\$ 87,300,000	\$ 92,900,000

Programmed Amount

Date of Estimate (Month/Year) Month / Year
5 / 24

Estimated Construction Start (Month/Year) 9 / 25

Number of Working Days = 250

Estimated Mid-Point of Construction (Month/Year) 11 / 24

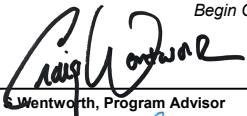
Estimated Construction End (Month/Year) 10 / 26

Number of Plant Establishment Days 450

Estimated Project Schedule

PID Approval 6/5/2023
PA/ED Approval 6/14/2024
PS&E 5/1/2025
RTL 6/2/2025
Begin Construction 9/1/2025

Estimate Concurred by


Craig S. Wentworth, Program Advisor

6/3/2024

Date

909-501-5107

Phone

Estimate Concurred by


Nader Naguib, Project Manager

5/31/24

Date

951-818-9929

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 3,070,400
2	Pavement Structural Section	\$ 21,000
3	Drainage	\$ 1,000,000
4	Specialty Items	\$ 8,672,000
5	Environmental	\$ 7,301,000
6	Traffic Items	\$ 1,137,600
7	Detours	\$ 7,312,900
8	Minor Items	\$ 855,500
9	Roadway Mobilization	\$ 2,937,100
10	Supplemental Work	\$ 782,500
11	State Furnished	\$ 1,614,800
12	Time-Related Overhead	\$ 3,089,200
13	Total Roadway Contingency	\$ 5,669,100

TOTAL ROADWAY ITEMS	\$ 43,463,100
----------------------------	----------------------

Estimate Prepared By :



Ha Vu, Project Engineer

5/30/2024

Date

909-518-8646

Phone

Estimate Reviewed and
Approved By :


Tuan Truong, Design Senior

5/30/2024

Date

909-501-5875

Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190136	Roadway Excavation (Detour)	CY	0	x	40.00	= \$	-
192003	Structure Excavation (Bridge)	CY	6,308	x	165.00	= \$	1,040,820
193013	Structure Backfill (Retaining Wall)	CY	0	x	110.00	= \$	-
170103	Clearing & Grubbing	LS	1	x	195,000.00	= \$	195,000
100100	Develop Water Supply	LS	1	x	300,000.00	= \$	300,000
198010	Imported Borrow	CY	38,364	x	40.00	= \$	1,534,560
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	3,070,400
--------------------------------------	-----------	------------------

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
394090A	Maintenance Vehicle Pullout	EA	6	x	3500.00	= \$	21,000
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	21,000
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SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price (\$)		Cost
510090	Structural Concrete Box Culvert	CY	250	x	4,000.00	= \$	1,000,000

TOTAL DRAINAGE ITEMS	\$	1,000,000
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price (\$)		Cost
080060	Progress Schedule (Critical Path Method)	LS	1	x	30,000.00	= \$	30,000
477020	MSE Wall	SQFT	38,725	x	169.00	= \$	6,544,525
8000XX	Chain Link Fence (Insert Type)	LF	30,908	x	50.00	= \$	1,545,400
80XXXX	XX" Chain Link Gate (Type CL-X)	EA	6	x	3,500.00	= \$	21,000
8331XX	Concrete Barrier (Insert Type)	LF	1,500	x	300.00	= \$	450,000
839301	Single Thrie Beam Barrier	LF	900	x	50.00	= \$	45,000
839584	Alternative In-line Terminal System	EA	6	x	6,000.00	= \$	36,000

TOTAL SPECIALTY ITEMS	\$	8,672,000
------------------------------	-----------	------------------

SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
146002 Contractor-Supplied Biologist	LS	1 x	232,163.00 = \$	232,163
803210 Temporary Desert Tortoise Fence	LS	1 x	213,704.70 = \$	213,705
160110 Temporary High-Visibility Fence	LS	1 x	70,902.42 = \$	70,902
Subtotal Environmental Mitigation				\$ 516,770

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
200111 Boulders (6'-12' for erosion control on slopes and decoration)	EA	200 x	900.00 = \$	180,000
204013 Plant (Group M)	EA	600 x	50.00 = \$	30,000
204099 Plant Establishment Work	LS	1 x	150,000.00 = \$	150,000
205033 Gravel Mulch 30% of Bridge SQFT	SQFT	3,000 x	5.00 = \$	15,000
204011 Architectural Treatment (5%-8% Structures Cost)	LS	1 x	2,231,750.00 = \$	2,231,750
204011A Steel Artwork	LS	1 x	3,300,000.00 = \$	3,300,000
210430 Hydroseed	SQFT	1,894,860 x	0.16 = \$	303,178
Subtotal Landscape and Irrigation				\$ 6,209,928

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move-In/Move-Out (Erosion Control)	EA	6 x	10000.00 = \$	60,000
210120 Erosion Control (Duff)	SQFT	1,894,860 x	0.05 = \$	94,743
Subtotal Erosion Control				\$ 154,743

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130100 Job Site Management	LS	1 x	150,000.00 = \$	150,000
130301 Storm Water Pollution Prevention Plan	LS	1 x	12,500.00 = \$	12,500
130310 Rain Event Action Plan	EA	18 x	500.00 = \$	9,000
130320 Storm Water Sampling and Analysis Day	EA	18 x	500.00 = \$	9,000
130330 Storm Water Annual Report	EA	6 x	2,000.00 = \$	12,000
130505 Move-In/Move-Out (Erosion Control)	EA	6 x	1,000.00 = \$	6,000
130560 Temporary Soil Binder	SQYD	100,000 x	0.30 = \$	30,000
130620 Temporary Drainage Inlet Protection	EA	22 x	280.00 = \$	6,160
130640 Temporary Fiber Roll	LF	20,000 x	7.00 = \$	140,000
130650 Temporary Gravel Bag Berm	LF	2,000 x	10.00 = \$	20,000
130680 Temporary Silt Fence (ESA)	LF	7,500 x	6.00 = \$	45,000
130710 Temporary Construction Entrance	EA	12 x	6,900.00 = \$	82,800
130720 Temporary Construction Roadway	SQYD	6,000 x	2.00 = \$	12,000
130730 Street Sweeping	LS	1 x	20,000.00 = \$	20,000
130900 Temporary Concrete Washout	LS	1 x	15,000.00 = \$	15,000
XXXXXX	LS	x	= \$	-
Subtotal NPDES				\$ 419,460

Supplemental Work for NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
066595 Water Pollution Control Maintenance Sharing*	LS	1 x	12,500.00 = \$	12,500
066596 Additional Water Pollution Control**	LS	1 x	10,000.00 = \$	10,000
066597 Storm Water Sampling and Analysis***	LS	x	= \$	-
066916 Annual Construction Ggeneral Permit Fees	LS	1 x	3,210.00 = \$	3,210
XXXXXX Some Item	LS	x	= \$	-
Subtotal Supplemental Work for NDPS				\$ 25,710

TOTAL ENVIRONMENTAL	\$ 7,301,000
----------------------------	---------------------

SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity		Unit Price (\$)		Cost
XXXXX Wildlife Camera	EA	6	x	10,000.00	= \$	60,000
<i>Subtotal Traffic Electrical</i>						<i>\$ 60,000</i>

6B - Traffic Signing and Striping

Item code	Unit	Quantity		Unit Price (\$)		Cost
820840 Roadside Sign - One Post	EA	12	x	500.00	= \$	6,000
846020 Remove Painted Traffic Stripe	LF	96,000	x	0.85	= \$	81,600
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)	LF	96,000	x	1.00	= \$	96,000
120090 Construction Area Signs	LS	1	x	40,000.00	= \$	40,000
84XXXX Permanent Pavement Delineation	LS		x		= \$	-
<i>Subtotal Traffic Signing and Striping</i>						<i>\$ 223,600</i>

6C - Traffic Management Plan

Item code	Unit	Quantity		Unit Price (\$)		Cost
128651 Portable Changeable Message Sign (EA)	EA	18	x	\$ 5,000	= \$	90,000
<i>Subtotal Traffic Management Plan</i>						<i>\$ 90,000</i>

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity		Unit Price (\$)		Cost
120103 Stationary Impact Attenuator Vehicle	Day	60	x	750.00	= \$	45,000
120165 Channelizer (Surface Mounted)	EA	450	x	50.00	= \$	22,500
120204 Portable Radar Speed Feedback Sign System Day	EA	1,500	x	130.00	= \$	195,000
120100 Traffic Control System	LS	1	x	300,000.00	= \$	300,000
129152 Temporary Radar Speed Feedback Sign System	EA	0	x	12,400.00	= \$	-
120320 Temporary Barrier System	LF	4,000	x	35.00	= \$	140,000
810190 Guard Railing Delineator	EA	30	x	50.00	= \$	1,500
014105 Alternative Temporary Crash Cushion TL-3	EA	12	x	5,000.00	= \$	60,000
<i>Subtotal Stage Construction and Traffic Handling</i>						<i>\$ 764,000</i>

TOTAL TRAFFIC ITEMS	\$ 1,137,600
----------------------------	---------------------

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	31,680	x	40.00	= \$	1,267,200
390132	Hot Mix Asphalt (Type A)	TON	20,454	x	155.00	= \$	3,170,370
260203	Class 2 Aggregate Base (CY)	CY	2,075	x	55.00	= \$	114,125
129000	Temporary Railing (Type K)	LF	37,680	x	25.00	= \$	942,000
120149	Temporary Pavement Marking (Paint)	SQFT	29,400	x	3.10	= \$	91,140
397005	Tack Coat	TON	5.0	x	1,200.00	= \$	6,000
390100	Prime Coat	TON	5.0	x	1,200.00	= \$	6,000
398300	Remove Base and Surfacing	CY	34,320	x	50.00	= \$	1,716,000
XXXXXX	Some Item	LS		x		= \$	-

TOTAL DETOURS	\$ 7,312,900
----------------------	---------------------

SUBTOTAL SECTIONS 1 through 7	\$ 28,514,900
--------------------------------------	----------------------

SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items	0.0%	\$	-
-----------	------	----	---

8B - Bike Path Items

Bike Path Items	0.0%	\$	-
-----------------	------	----	---

8C - Other Minor Items

Other Minor Items	3.0%	\$	855,447
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Total of Section 1-7	\$ 28,514,900	x	3.0%	= \$	855,447
----------------------	---------------	---	------	------	---------

TOTAL MINOR ITEMS	\$ 855,500
--------------------------	-------------------

SECTIONS 9: ROADWAY MOBILIZATION *

Item code							
999990	Total Section 1-8	\$	29,370,400	x	10%	= \$	2,937,040

TOTAL ROADWAY MOBILIZATION	\$ 2,937,100
-----------------------------------	---------------------

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
066670	Payment Adjustments For Price Index Fluctuations	LS	1	x	80,700.00	= \$	80,700
066094	Value Analysis	LS	1	x	10,000.00	= \$	10,000
066919	Dispute Resolution Board	LS	1	x	15,000.00	= \$	15,000
066916	Annual Construction General Permit fees	LS		x		= \$	-
066015	Federal Trainee Program	LS	1	x	13,600.00	= \$	13,600
066610	Partnering	LS	1	x	50,000.00	= \$	50,000
066595	Water Pollution Control Maintenance Sharing	LS		x		= \$	-
066596	Additional Water Pollution Control	LS		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	25,710
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Total Section 1-8	\$ 29,370,400	2%	= \$	587,408
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TOTAL SUPPLEMENTAL WORK	\$ 782,500
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS	1	x	531,000.00	=	\$531,000
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066062	COZEEP Contract	LS	1	x	600,000.00	=	\$600,000
066064	Radar Speed Message Sign (Specter Sign)	LS	1	x	180,000.00	=	\$180,000
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	29,370,400		1%	= \$	293,704

TOTAL STATE FURNISHED	\$1,614,800
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$51,486,400 (used to calculate total TRO)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
090100	Time-Related Overhead	WD	250	X	\$12,357	=	\$3,089,200

TOTAL TIME-RELATED OVERHEAD	\$3,089,200
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SECTION 13: ROADWAY CONTINGENCY*

Risk Amount from Risk Register	(for Known Risks)	0%	
Additional or Residual Contingency	(for Unknown/Undefined Risks)	15%	\$5,669,100
Total Section 1-12	\$	37,794,000	x 15% = \$5,669,100

TOTAL CONTINGENCY*	\$5,669,100
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		<u>Bridge 3</u>
DATE OF ESTIMATE	10/23/23		10/23/23		10/23/23
Bridge Name	Cave Mtn Animal Crossing		Soda Mtn Animal Crossing		Clark Mtn Animal Crossing
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	Precast Arch		Precast Arch		Precast Arch
Width (Feet) [out to out]	100 LF		100 LF		100 LF
Total Bridge Length (Feet)	198 LF		186 LF		198 LF
Total Area (Square Feet)	19800 SQFT		18600 SQFT		19800 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	Spread		Spread		Spread
Cost Per Square Foot	\$380		\$380		\$380
COST OF EACH	\$7,524,000		\$7,068,000		\$7,524,000

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$22,116,000
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TOTAL COST OF BUILDINGS	\$0
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Time-Related Overhead	10%	\$2,211,600
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STRUCTURES MOBILIZATION	10%	\$2,211,600
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STRUCTURES CONTINGENCY*	25%	\$6,634,800
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TOTAL COST OF STRUCTURES	\$30,962,400
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Estimate Prepared By: Yung-Nien Wang
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

5/23/2024
 Date

EA: 1N590 PID: 0823000021

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way Data Sheet.

			<i>Current Value Future Use</i>		<i>Escalated Value</i>
A)	A1)	Acquisition, including Excess Land, Fees, Damages, Goodwill	\$	0	\$ 0
	A2)	Railroad Acquisition	\$	0	\$ 0
	A3)	Federal Lands - Special Use	\$	0	\$ 0
B)	B1)	Acquisition of Offsite Mitigation	\$	540,000	\$ 540,000
C)	C1)	Utility Relocation (State Share)	\$	0	\$ 0
	C2)	Potholing (Design Phase)	\$	0	\$ 0
D)	RAP and/or Last Resort Housing		\$	0	\$ 0
E)	Clearance & Demolition		\$	0	\$ 0
F)	Title and Escrow		\$	0	\$ 0
G)	Project Permit Fees		\$	111,200	\$ 111,200
H)	Condemnation Settlements	<u>0%</u>	\$	0	\$ 0

L)

TOTAL RIGHT OF WAY ESTIMATE**\$651,200**

M)

TOTAL R/W ESTIMATE: Escalated**\$651,200**

N)

RIGHT OF WAY SUPPORT**\$188,000**

Support Cost Estimate Prepared By	Marissa Cofer Project Coordinator ¹	909-518-4119 Phone
Utility Estimate Prepared By	Edward Hewitt Utility Coordinator ²	909-518-4478 Phone
R/W Acquisition Estimate Prepared By	Kristine Flint Right of Way Estimator ³	909-518-4699 Phone

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

Attachment D

RISK REGISTER CERTIFICATION



EA 1N590 QUALITATIVE RISK REGISTER

EA 1N590			Phase: 0			SBD 015 PM: R 114.0/ 171.5			PM: Nader Naguib		Const Capital Estimate: \$71,583K		Project Description: CONSTRUCT WILDLIFE CROSSINGS AND FENCING IN THE MOJAVE DESERT AT THREE LOCATIONS ALONG INTERSTATE 15 NEAR CAVE MOUNTAIN, SODA MOUNTAIN, AND				Project Location: IN SBD CO NR BAKER AT VAR LOCS FROM 2.4 MI N/O AFTON RD OC TO 0.1 MI N/O BAILEY RD OC			
Program Code: 201.999, 800.100 /			M200 Target: 10/16/2						ARM: Vida Delrooz		R/W Capital Estimate: \$652K									
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Relevancy/Current Status/Assumptions/Comments/Triggers	Probability	Cost Impact				Schedule Impact		Response Strategy	Response Actions	Risk Owner		
			Originator							Ph	Impact	Ph	Impact	Ph	Impact					
1	Active	Opportunity	4/18/2023	8/10/2023	Design	Arch Bridge	If the Arch Type Structure could meet Caltrans Seismic Design Criteria, there might be cost and schedule savings.	Caltrans was not able to independently verify the cost and schedule saving.	Moderate	0				0		Exploit	Brightline West team is currently working on preliminary design and will submit the data to Caltrans for review. Cost and schedule will be adjusted accordingly.	Juan Carlos Velasquez		
			1										1							
			2								9		2							
			3							Moderate	4	Very High	3	High						
2	Active	Threat	4/19/2023	8/16/2023	Str Design	Specific Design Criteria	Approval of the Project Specific Seismic Design Criteria (PSDC) for the Arch type bridge could lead to schedule delay and support cost increase.	Per SDC 2.0, Arch Type structure is a Nonstandard bridge. Nonstandard bridges shall require Project Specific Seismic Design Criteria (PSDC) in addition to the SDC. A Seismic Safety Peer Review team shall be established for prominent or unusually complex bridges requiring a PSDC. Extensive coordination between DES units, manufacturer and engineering consultant is expected.	Low	0				0		Mitigate	Brightline West will make effort to submit the complete package to Caltrans early. DES will make the review as a high priority to avoid any delay or cost increase.	Feiruz Aberra		
			1							Moderate			1	Moderate						
			2								9		2							
			3								4		3							
3	Active	Opportunity	4/19/2023	8/16/2023	Design	Support Cost Saving	If Brightline West will be authorized to procure the project, there could be support cost and schedule savings opportunity.	Legislation was passed that Brightline West can do the procurement, pending letter/agreement to allow Brightline West to proceed.	High	0				0		Exploit	Caltrans legal is working on a letter and agreement to allow Brightline West to proceed with the procurement.	Nader Naguib		
			1							High			1	High						
			2								9		2							
			3							High	4		3	High						
6	Active	Threat	4/19/2023	8/16/2023	Design	Wildlife Monitoring Equipment	The requirements for wildlife monitoring equipment (cameras, etc.) on the structures are unknown at this time. This may result in Capital cost increase.	Based on preliminary conversations, it is evident that CDFW would like to have monitoring equipment on each crossing to track the utilization of the crossings by wildlife. The details of this equipment are unknown at this time.	Moderate	0				0		Mitigate	Caltrans design to coordinate with CDFW to gather details of the equipment to include in the plans and cost estimate.	Jonathan den Hartog		
			1										1							
			2								9		2							
			3								4	Low	3							



EA 1N590 QUALITATIVE RISK REGISTER

EA 1N590			Phase: 0			SBD 015 PM: R 114.0/ 171.5			PM: Nader Naguib		Const Capital Estimate: \$71,583K		Project Description: CONSTRUCT WILDLIFE CROSSINGS AND FENCING IN THE MOJAVE DESERT AT THREE LOCATIONS ALONG INTERSTATE 15 NEAR CAVE MOUNTAIN, SODA MOUNTAIN, AND				Project Location: IN SBD CO NR BAKER AT VAR LOCS FROM 2.4 MI N/O AFTON RD OC TO 0.1 MI N/O BAILEY RD OC			
Program Code: 201.999, 800.100 /			M200 Target: 10/16/2						ARM: Vida Delrooz		R/W Capital Estimate: \$652K									
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Relevancy/Current Status/Assumptions/Comments/Triggers	Probability	Cost Impact				Schedule Impact		Response Strategy	Response Actions	Risk Owner		
			Originator							Ph	Impact	Ph	Impact	Ph	Impact					
7	Active	Threat	4/19/2023	8/16/2023	Design	Locked Gates	Approval is needed from FHWA to install locked gates at each structure for Caltrans maintenance and CDFW access. It may take some time to obtain approval from FHWA. This may result in capital cost increase.	FHWA has already been briefed. Primary concern is that the gates remain locked and are only used by authorized personnel.	Low	0				0		Mitigate	Caltrans will continue to coordinate with FHWA for approval. Cost will be adjusted if needed.	Jonathan den Hartog		
			1										1							
			2								9		2							
			3								4	Very Low	3							
8	Active	Threat	4/19/2023	8/16/2023	Environmental	Permits	If it is determined that protected Waters of the State or Waters of the US are found in the project footprint of the over crossings, then a 404, 401, and 1600 may be required which may require additional measures and mitigation. This may increase the project's cost and delay the schedule.	The wash near Clark Mountain location may require 404 and 401 permits. Due to the expedited nature of the project. Environmental was unable to write a Task Order to conduct a jurisdictional delineation (JD) to determine the location of potential waters impacts during 0 phase. A JD may be done in Phase 1, but any waters found may require further consultation with State and Federal agencies. Obtaining 404, 401, and 1600 permits will take time and coordination. Bio has used the National Wetlands Inventory & related tools to determine if there is potential drainages & will use that data in the environmental document and in early coordination with the agencies.	Moderate	0				0		Mitigate	Brightline West to refine the design to confirm whether impacts can be avoided. If impacts cannot be avoided, they will expedite coordination with regulatory agencies. Environmental cannot conduct a jurisdictional delineation at this time. Environmental has assumed worst case scenario on the project footprints and is anticipating a 404, 401, & 1600 permit will be needed. A Task Order for a JD is planned for Phase 1 to confirm water locations. Cost and schedule will be adjusted as needed.	Andrew Walters		
			1							Low			1	Moderate						
			2								9	Low	2							
			3								4	Low	3							
10	Active	Threat	4/19/2023	8/16/2023	Utilities	Utility Relocation	A Consent-To-Common-Use (CCUA) needs to be designated for AT&T at the Clark Mountain location. If the AT&T and/or SCE facilities at this location need to be relocated, new easement rights will need to be acquired for these utilities. This may result in cost increase and schedule delay.	There are AT&T and SCE overhead utilities near Clark Mountain Location.	Very Low	0				0		Mitigate	CT and Brightline West will work together to avoid utility relocation if possible and Brightline West will refine the design to confirm whether impacts can be avoided. However, a revised CCUA for AT&T is necessary regardless. Schedule and cost will be adjusted if needed.	Max Auyeung		
			1							Low			1	Low						
			2							Very Low	9	Low	2	Very Low						
			3							Very Low	4	Very Low	3	Low						
11	Active	Threat	4/19/2023	8/16/2023	Design	Delay Due to Funding	If Brightline West project gets delayed due to funding or other reasons, this may impact the schedule and may result in a schedule delay.	IIJA funds have a stipulation that the project needs to achieve RTL by June 2026.	Low	0				0		Avoid	Caltrans and Brightline West teams are working together to ensure project deadlines are met to avoid any delay.	Nader Naguib		
			1										1	Low						
			2								9		2							
			3								4		3	Low						

EA 1N590 QUALITATIVE RISK REGISTER

EA 1N590			Phase: 0			SBD 015 PM: R 114.0/ 171.5			PM: Nader Naguib		Const Capital Estimate: \$71,583K		Project Description: CONSTRUCT WILDLIFE CROSSINGS AND FENCING IN THE MOJAVE DESERT AT THREE LOCATIONS ALONG INTERSTATE 15 NEAR CAVE MOUNTAIN, SODA MOUNTAIN, AND Project Location: IN SBD CO NR BAKER AT VAR LOCS FROM 2.4 MI N/O AFTON RD OC TO 0.1 MI N/O BAILEY RD OC					
Program Code: 201.999, 800.100 /			M200 Target: 10/16/2						ARM: Vida Delrooz		R/W Capital Estimate: \$652K							
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Relevancy/Current Status/Assumptions/Comments/Triggers	Probability	Cost Impact				Schedule Impact		Response Strategy	Response Actions	Risk Owner
			Originator							Ph	Impact	Ph	Impact	Ph	Impact			
12	Active	Threat	4/19/2023	8/16/2023	Design	Water Supply	Water supply for construction may be difficult to obtain. This may affect cost and schedule.	The crossing sites are at remote locations, and may not have easy access to water supply.	Moderate	0				0		Transfer	RE will work with the contractor to ensure project is not delayed due to water supply shortage. The risk will be further evaluated in PSE.	Jonathan den Hartog
			1										1					
			2								9		2					
			3								4	Low	3	Low				
13	Active	Threat	4/19/2023	8/16/2023	Design	Importing Materials	The crossing sites are at remote locations, and may not have easy access to import material. The need for import materials may also increase costs and delay the schedule.	Importing materials to the job site may encounter some difficulties during construction.	Low	0				0		Transfer	RE will work with the contractor to ensure project is not delayed due to issues with import materials. PM may need to adjust the cost and schedule if needed.	Jonathan den Hartog
			1										1					
			2								9		2					
			3								4	Low	3	Low				
14	Active	Threat	4/19/2023	8/16/2023	Design	Aesthetics	Aesthetics for the structures has not yet been well defined. This may result in cost increase and schedule delays.	Although costs have been included for some aesthetics, public feedback and discussion internal to Caltrans has indicated that more aesthetics may be required to showcase these important projects.	Low	0				0		Mitigate	Caltrans to work with CDFW and other stakeholders to better define aesthetic requirements early in design. A Visual Impact Assessment (VIA) is being developed by Caltrans to define aesthetic requirements as early as possible. Cost and schedule may be adjusted accordingly.	Jonathan den Hartog
			1							Very Low			1	Low				
			2								9		2					
			3								4	Low	3	Very Low				
17	Active	Threat	4/20/2023	8/16/2023	DES	Unforeseen Geotechnical Condition	Due to insufficient subsurface information there may be unforeseen Geotechnical condition at the site and the foundation design may change based on Geotechnical report. This change may lead to a cost increase and a schedule delay.	A Preliminary Foundation Report has not been issued. Deep foundation design may increase construction cost and extend schedule.	Low	0				0		Mitigate	Geotechnical investigations will start as early as possible. Preliminary Geotechnical Design Report will provide confirmation of foundation Type. Cost estimate will be revised based on the selected foundation type. Schedule may be adjusted if needed.	Feiruz Aberra
			1							Low			1	Low				
			2								9		2					
			3							Low	4	Moderate	3	Moderate				



EA 1N590 QUALITATIVE RISK REGISTER

EA 1N590			Phase: 0			SBD 015 PM: R 114.0/ 171.5			PM: Nader Naguib		Const Capital Estimate: \$71,583K		Project Description: CONSTRUCT WILDLIFE CROSSINGS AND FENCING IN THE MOJAVE DESERT AT THREE LOCATIONS ALONG INTERSTATE 15 NEAR CAVE MOUNTAIN, SODA MOUNTAIN, AND				Project Location: IN SBD CO NR BAKER AT VAR LOCS FROM 2.4 MI N/O AFTON RD OC TO 0.1 MI N/O BAILEY RD OC			
Program Code: 201.999, 800.100 /			M200 Target: 10/16/2						ARM: Vida Delrooz		R/W Capital Estimate: \$652K									
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Relevancy/Current Status/Assumptions/Comments/Triggers			Probability	Cost Impact				Schedule Impact		Response Strategy	Response Actions	Risk Owner
			Originator								Ph	Impact	Ph	Impact	Ph	Impact				
18	Active	Threat	4/20/2023	8/16/2023	Environmental	Hazardous Material	Due to uncertainty of the soil contamination levels within the project limits, a detailed site investigation (DSI) was conducted in July 2023. If the DSI identifies concentrations of ADL and other contaminants above regulated thresholds, proper handling and disposal of soils may be required. This would impact project cost and schedule.	Preliminary soil testing records showed non-hazardous ADL concentrations in most of the soil samples collected on all 3 locations. Detailed soil investigation report may recommend the type of handling needed, if excess soil generated by the project will require export.			Very Low	0				0		Mitigate	Environmental Engineering conducted a detailed site investigation (DSI) to identify any potential contamination during PAED and will provide appropriate SSPs/NSSPs. If additional funds will be needed for handling and disposal of contaminated soil, it will be captured in the estimate. PM may adjust the cost and the schedule if needed.	Paul Phan
			1										1							
			2										9		2					
			3										4	Low	3					
19	Active	Threat	5/4/2023	8/16/2023	Right of Way	R/W and BLM	As a result of 3 months in the schedule for RW, we may not be able to secure the necessary rights from BLM, which may delay the RLT.	An easement from BLM, is required for the project. We are unable to certify the project without the easement. M224 6/1/23 M225 9/1/23 M410 9/29/23 M460 12/8/2023			Very Low	0				0		Mitigate	R/W is coordinating with BLM making sure to acquire the easement in time. PM may adjust the schedule if needed.	Christine Senteno
			1										1			Moderate				
			2										9		2	Moderate				
			3										4		3	Low				
21	Active	Threat	8/1/2023	8/17/2023	Environmental	Desert Tortoise	If a desert tortoise (DT) or other special-status species protected under the California Endangered Species Act (CESA) detected within the project area, then construction work may have to be stopped until the animal moves on its own accord out of the project area; otherwise, a 2081 permit will be required from California Department of Fish & Wildlife (CDFW). This may increase both capital and support cost, and delay the project schedule.	The project impact area (is near suitable habitat for DT and within critical habitat according to The California Natural Diversity Database (CNDDB)) has historical listings of State-protected species. Habitat assessments in April 2023 did not show any evidence of DT special-status species in the Biological Study Area (BSA). Therefore, biology did not pursue a CDFW 2081 permit for this project due to the low risk on the project site and the high cost of mitigation as required by the permit; therefore, the project cannot have "take" of State-listed species, hence the risk. A CDFW 2081 permit would require costs associated with the permit fee, mitigation, and a CCO relocation plan. If a protected animal appears on the project site, the following may apply: a-If the animal is not in immediate danger and is able to move of its own accord, the project delay would likely range 24 hours to 2 weeks. b-If the animal doesn't move and a 2081 permit is needed, the project delay would likely range 150 - 210 days.			Low	0				0		Mitigate	A biological monitor will perform pre-construction surveys to determine presence of special status species. If during project activities a special status species is discovered, all construction activities must stop within the buffer zone and the Caltrans Biologist and Resident Engineer must be notified. The monitor will provide employee training to ensure no State Take of the species and lower the risk during construction. These measures will be captured in the work plan and the Contractor Supplied Biologist (CSB) cost will be included in the MCCE. Biology will also include appropriate SSP.	Craig Wentworth
			1										1							
			2										9	Low	2					
			3									Low	4	Moderate	3	Moderate				
22	Active	Threat	8/3/2023	8/14/2023	Environmental	Rare Plants	If rare plants are found within the Project footprint, then Environmental Sensitive Area (ESA) temporary high visibility fencing and associated no-work zone would be placed around rare plants. A subsequent relocation plan may be required. Both actions may delay Project construction and increase the cost.	The three over crossings have historical presence of special-status plant species. This includes but is not limited too Joshua tree (Yucca brevifolia), San Bernardino milk-vetch (Astragalus bernardinus), and Emory's crucifixion-thorn (Castela emoryi). If rare plants are found within the Project footprint, ESA temporary high visibility would have to be added to the Project cost estimate. Construction is not to occur in these fenced areas and a relocation plan may be drafted during phase 1 to be implemented by the contractor.			Low	0				0		Mitigate	Bio has conducted rare plant surveys during PA&ED phase and has found special-status plant species. A contractor supplied biologist and temporary fencing cost will be included in the MCCE. The Environmental Document will identify avoidance and minimization measures such as pre-construction plant surveys, ESA temporary high visibility fencing, and a Worker Environmental Awareness Program (WEAP) training to ensure no impacts to plants happens during construction activities. Schedule may be adjusted to incorporate a draft of a relocation plan report and relocation implementation.	Craig Wentworth
			1										1							
			2										9		2					
			3									Low	4	Low	3	Low				



EA 1N590 QUALITATIVE RISK REGISTER

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Program Code: 201.999, 800.100 /				M200 Target: 10/16/2						ARM: Vida Delrooz		R/W Capital Estimate: \$652K									
Risk No.	Status	Type	Date of Origin	Updated	Category	Title	Risk Statement	Relevancy/Current Status/Assumptions/Comments/Triggers	Probability	Cost Impact				Schedule Impact		Response Strategy	Response Actions	Risk Owner			
			Originator							Ph	Impact	Ph	Impact	Ph	Impact						
23	Active	Threat	8/3/2023	8/17/2023	Environmental	Monarch Butterfly	If the Monarch butterfly becomes federally listed in the Endangered Species List in 2023/2024, then this listing may require a reevaluation, additional technical studies, USFWS Section 7 Consultation, and mitigation. This may impact project schedule and cost.	Milkweed is the host plant for monarch and does have historical presence in the project location. While no milkweed was observed during plant surveys in 2023, it might be present later. Documentation of this plant species may require USFWS Section 7 Consultation for take of the Monarch, if the species is listed. This permit typically requires an Environmental Reevaluation and Section 7 consultation. Minimum of 6 to 12 months needed to process these documents.	Low	0				0		Mitigate	Bio will coordinate with our USFWS Liaison as new information becomes available. If the Monarch is listed, then the project may require a reevaluation and biology may conduct additional technical studies to assess suitability. If suitability exists, then USFWS Section 7 consultation and mitigation may be required. PM may need to adjust cost and schedule.	Craig Wentworth			
			1							Low			1	Low							
			2								9		2								
			3							Low	4	Low	3	Low							
24	Active	Threat	8/3/2023	8/17/2023	Environmental	CEQA SERP Application	If Caltrans' CEQA Statutory Exemption Restoration Project (SERP) application is denied, then the project will not be eligible for statutory exemption and a 2081 permit may be required. This may delay project schedule and increase the cost.	Because this project is a restoration only project, it is eligible for a CEQA statutory exemption under the SERP process. This means that Caltrans will not need a 2081 for impacts to species such as Joshua Tree or desert tortoise. However, if this application is denied, then Caltrans will have to go through the process of getting a 2081 permit if needed.	Low	0				0		Mitigate	Caltrans is working with SERP representatives to coordinate the submittal of the application. CDFW has already informally concurred that this project is eligible for SERP status. Caltrans will continue to informally consult with CDFW representatives as we move through the application process to ensure it will be accepted.	Andrew Walters			
			1							Low			1	Low							
			2								9	Low	2								
			3								4	Low	3								

RISK REGISTER CERTIFICATION (ACCOUNTABILITY CHECKPOINTS) FORM

PPM-0001 (REV 07/2013)

The risk register is to be approved and signed-off by the District Deputies* listed below for all scalability levels. By signing this form, you are certifying that you have reviewed the risks documented in the register and agree that they have been managed to the extent possible by the PDT.

<u>Project Information</u> ☐ Capital Project ☐ Major Maintenance Project (Check One)		Total Estimated Const Cost:	\$71,583,000
Project ID/District-EA	0823000021	1N590	
Project Description	CONSTRUCT WILDLIFE CROSSINGS AND FENCING IN THE MOJAVE DESERT AT THREE LOCATIONS ALONG		
Project Manager (PM)	Nader Naguib		
Risk Management Coordinator	Md Shaheed		
☐ No Risk Register Certification Required -- Check box if project is less than \$1 million in total cost and risk register not prepared. Sign below and submit this form with PID, PA&ED, PS&E submittals, and RE Handoff Files (as applicable).			
Project Manager Signature			

<u>PID (Recommended for Capital Projects Only excluding Minor Projects)</u>			
Project Manager	<u>Electronically signed by Nader N Naguib</u>	Date:	April 25, 2023
Deputy District Director, Planning	<u>Electronically signed by Ray I Desselle</u>	Date:	April 25, 2023
Deputy District Director, Design	<u>Electronically signed by Mahmuda Akhter</u>	Date:	April 25, 2023
Deputy District Director, Construction	<u>Electronically signed by Christy Connors</u>	Date:	April 25, 2023
Deputy District Director, Right of Way	<u>Electronically signed by Rebecca Guirado</u>	Date:	April 25, 2023
Deputy District Director, Environmental	<u>Electronically signed by Tracey D D'aoust Roberts</u>	Date:	May 9, 2023
Deputy District Director, Project Management	<u>Electronically signed by Bassem W Barsoum</u>	Date:	April 27, 2023

<u>PA&ED (Required for Capital Projects Only)</u>			
Project Manager	Sign	<u>Electronically signed by Nader N Naguib</u>	Date: August 17, 2023
Deputy District Director, Design	Sign	<u>Electronically signed by Mahmuda Akhter</u>	Date: August 22, 2023
Deputy District Director, Construction	Sign	<u>Electronically signed by Christy Connors</u>	Date: August 18, 2023
Deputy District Director, Right of Way	Sign	<u>Electronically signed by Rebecca Guirado</u>	Date: August 18, 2023
Deputy District Director, Environmental	Sign	<u>Electronically signed by Kurt R Heidelberg</u>	Date: August 31, 2023
Deputy District Director, Project Management	Sign	<u>Electronically signed by Meardev S Tim</u>	Date: August 18, 2023

<u>Prior to PS&E (Required for Capital Projects and Major Maintenance Projects)</u>	
Project Manager	Date:
Deputy District Director, Design	Date:
Deputy District Director, Construction	Date:
Deputy District Director, Right of Way	Date:
Deputy District Director, Environmental	Date:
Deputy District Director, Project Management	Date:

<u>RE File Hand-off (Recommended for Capital Projects and Major Maintenance Projects)</u>	
Project Manager	Date:
Deputy District Director, Construction	Date:

Attachment E

PROJECT INITIATION PROPOSAL SIGNATURES

SECTION 4: PROJECT INITIATION DOCUMENT (PID)

SHOPP	☐ Long Lead	NON-SHOPP State Sponsored
ACTIVITY CATEGORY		Caltrans ☐ Oversight
10 YEAR SHOPP PLAN		Funding
PROPOSED SHOPP CYCLE		☐ Maintenance
PID CYCLE 2024		Program
PID TYPE PSR-PDS		☐ A&E/ CONSULTANTS

☒ Stand Alone ☐ Multi-Asset *NOTE C: FOR ADDITIONAL SATELLITES, USE PAGE 2 OF FORM*

PROJECT MANAGER (PM) Nader Naguib	DES-TECH. LIAISON ENGINEER (TLE)
DISTRICT ASSIGNMENT	PROJECT ENGINEER/DESIGN MANAGER

FY	DISTRICT (PYs)	DES (PYs)	TOTAL (PYs)
22/23	1.80	0.10	1.90
GRAND TOTAL	1.80	0.10	1.90

PROGRAM ADVISOR/NOMINATION COORDINATOR	DATE
 Max Quach	8/30/2022
DISTRICT ASSET MANAGER	DATE
 Bassem Barsoum	8/31/2022
	DATE

Assets	Program	Performance	Class	Quantities	Unit
Anchor (A)	State Sponsored	400.100 Locally Generated Funds			
Satellite (1)					
Satellite (2)					
Satellite (3)					

M000 BEGIN PID	8/29/2022	☐ Accelerated PID	☐ SB 1 (3290)
M03 BEGIN FUNCT PID COMPONENTS	11/28/2022	TARGET RTL FY	2029/30
M006 DRAFT FOR DIST CIRC & REVIEW	4/25/2023	CTC MEETING SCHEDULE	
M009 FINAL DRAFT FOR EXEC REVIEW	6/14/2023		
M010 APPROVE PID	7/6/2023		

NOTE THAT ALL COSTS ARE ESCALATED	CONST. CAP		R/W CAP	
	ROADWAY	STRUCTURE	R/W CAP	
CONST. CAPITAL	\$72,982	\$61,521	\$20	
	PA&ED	PS&E	CONST.	R/W
SUPPORT	\$1,680	\$11,679	\$17,087	\$1,840
	R/W CAP	CONST CAP	SUPPORT	TOT. COST
TOTAL PROJ COST	\$20	\$134,503	\$32,286	\$166,809

Environmental Assumption				Right of Way Assumption			
CEQA	IS	NEPA	EA	☐ RR	☐ ADA	☐ UTIL	☐ ACQUISITION

☐ TPSIS
 ☐ SHOPP PERFORMANCE MEASURES REPORT (TYP)

☐ EXEC COOP
 ☒ CONCEPTUAL COST ESTIMATE

☐ PHOTOS
 ☒ Additional Data

☐ LAYOUT
 ☒ VICINITY MAP
 OTHER:

☐ TYP X-SECTION

Attachment F

PRE-PID AND POST-PID ASSET MANAGEMENT TOOL PERFORMANCE MEASURES OUTPUT PRINTOUTS

District: 08

Tool ID: 23799

Project ID: 0823000021

EA: 1N590

Co-Rte-PM: SBD-015-R114.0/171.5 (Primary Location)

View/Print PIR (Performance) Report

☒ Bridge
☒ Pavement
☐ Drainage
☐ Facilities
☐ Signs and Lighting
☐ Mobility
☐ Roadside
☒ Complete Streets
☒ Sustainability /Climate Change
☐ Advance Mitigation /Mitigation
☐ Major Damage & Betterments
☐ Green-house Gases
☐ Relinquishment

Performance & Accomplishments (TYP)

ActID	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	HQ Program Review - Agree with District?	HQ Comment	Review Date	Performance Change Date After Review	Comment
1	A08	Number of Bridges	No Performance Objective in the SHSMP	Each	3.000											
2	H32	Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	No											
3	H55	Justification for Complete Streets Not Applicable	Bike/Ped Prohib	1,2,3												

(Last Saved - 05/01/23 @ 4:01 PM by Catherine Barron)

Programming Performance Summary (All Locations)

Program Code	Activity Category	Asset Class	Asset	Performance Value	Performance Measure	Unit	Pre-Good	Pre-Fair	Pre-Poor	Pre-Total	Post Good	New	Post Good+New	Post-Fair	Post-Poor	Post-Total
201.999	Sustainability/Climate Change - Other		Other Program Objectives	0.0	Centerline mile(s)	Centerline mile(s)	0.0	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0	0.0

- Notes:**
- The crosswalk for reporting performance in the "Programming Performance Summary" was developed to assist the districts on performance reporting requirements for CTC and PCRs. For discrepancies or errors, please notify AM Tool admins via e-mail at CT-TAM@dot.ca.gov.
 - The data summarized in the table represents the performance reported or to be reported in CTIPS.
 - Programming only requires the breakdown of Good, Fair and Poor for Primary and Supplementary Asset Classes.
 - Reporting of bridge pre and post conditions may contain errors if the project RTL is before 2024/25.
 - Reporting drainage pre-total and post good may differ whenever projects contain abandoned/removed culverts as the culvert no longer exists at post construction, is deleted from the pre-total value for posting of the post good value, and gets deleted from the statewide CIP inventory database.
 - Reactive Safety projects will temporally use the same performance outputs of Safety Improvement projects. When the reporting requirements for CTC changes, the logic in the AM Tool will change.
 - During the transition to the new Proactive Safety objective, the performance output for projects with a primary activity category of Proactive Safety (under program codes 015, 112, or 235) will continue to be presented here in the units of measure corresponding to the activities historically reported to date. A change in units to "Annual Fatal and Serious Injury Collisions" for future programming requests is being planned.

District: 08

Tool ID: 23799

Project ID: 0823000021

EA: 1N590

Co-Rte-PM: SBD-015-R114.0/171.5 (Primary Location)

View/Print PIR (Performance) Report

☒ Bridge
☒ Pavement
☐ Drainage
☐ Facilities
☐ Signs and Lighting
☐ Mobility
☐ Roadside
☒ Complete Streets
☒ Sustainability /Climate Change
☐ Advance Mitigation /Mitigation
☐ Major Damage & Betterments
☐ Green-house Gases
☐ Relinquishment

Performance & Accomplishments (PRG)

ActID	Activity Detail	Performance Objective	Unit of Measurement	Quantity	Pre-Good	Pre-Fair	Pre-Poor	New	Post-Good	Post-Fair	Post-Poor	HQ Program Review - Agree with District?	HQ Comment	Review Date	Performance Change Date After Review	Comment
1	A08	Number of Bridges	No Performance Objective in the SHSMP	Each	3.000											
2	H32	Is any Location Within the Project Limits Ped/Bike Accessible?	No Performance Objective in the SHSMP	Yes/No	No											
3	H55	Justification for Complete Streets Not Applicable	Bike/Ped Prohib	1,2,3												

(Last Saved - 05/05/23 @ 5:49 AM by Catherine Barron)

Programming Performance Summary (All Locations)

Program Code	Activity Category	Asset Class	Asset	Performance Value	Performance Measure	Unit	Pre-Good	Pre-Fair	Pre-Poor	Pre-Total	Post Good	New	Post Good+New	Post-Fair	Post-Poor	Post-Total
201.999	Sustainability/Climate Change - Other		Other Program Objectives	0.0	Centerline mile(s)	Centerline mile(s)	0.0	0.0	0.0	0.0	0.0	0.000	0.0	0.0	0.0	0.0

- Notes:**
- The crosswalk for reporting performance in the "Programming Performance Summary" was developed to assist the districts on performance reporting requirements for CTC and PCRs. For discrepancies or errors, please notify AM Tool admins via e-mail at CT-TAM@dot.ca.gov.
 - The data summarized in the table represents the performance reported or to be reported in CTIPS.
 - Programming only requires the breakdown of Good, Fair and Poor for Primary and Supplementary Asset Classes.
 - Reporting of bridge pre and post conditions may contain errors if the project RTL is before 2024/25.
 - Reporting drainage pre-total and post good may differ whenever projects contain abandoned/removed culverts as the culvert no longer exists at post construction, is deleted from the pre-total value for posting of the post good value, and gets deleted from the statewide CIP inventory database.
 - Reactive Safety projects will temporally use the same performance outputs of Safety Improvement projects. When the reporting requirements for CTC changes, the logic in the AM Tool will change.
 - During the transition to the new Proactive Safety objective, the performance output for projects with a primary activity category of Proactive Safety (under program codes 015, 112, or 235) will continue to be presented here in the units of measure corresponding to the activities historically reported to date. A change in units to "Annual Fatal and Serious Injury Collisions" for future programming requests is being planned.

Attachment G

TRANSPORTATION PLANNING SCOPING INFORMATION SHEET (TPSIS)

Transportation Planning Scoping Information Sheet

Proposed Project Summary

EA #	1N590	AM Tool ID #		EFIS Project ID #	
County-Route-PM	SBD-15-PM 114/171.5				
Anchor Asset	Bridges				
Proposed Project Scope	Project scope is to construct vegetated wildlife crossings and fencing in the Mojave Desert at three locations along Interstate 15 near Cave Mountain, Soda Mountain, and Clark Mountain.				
Proposed Fund Type	SHOPP 2024				

Section 1: TPSIS Summary Statements & Recommended Actions

1-1 Project Summary Refer to TPSIS Section: ☐ 2 ☒ 3 ☐ 5 ☒ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ Other	Provide a justification if needs/opportunities are not recommended to be included in project scope.
Project Needs/Opportunities: There are opportunities to accommodate bicyclists that use the freeway shoulders within the project limits.	
Project Risks/Challenges: Potential project challenges include finding funding to complete the project. The proposed funding profile includes a mix of funding opportunities including some competitive funding programs that Caltrans would need to apply for on a competitive basis.	
1-2 List recommendations based on identified needs/opportunities to be included in project scope. <i>(Provide section references below)</i>	
- There are existing rumble strips within the project limits. To better accommodate the needs of bicyclists, when repaving consider providing intermittent gaps in the rumble strip patterns, (Standard Plan A40H). - Sufficient lighting should be provided under the crossing structures that illuminate the roadway	

Required Sections Checklist *(Check boxes below once completed):*

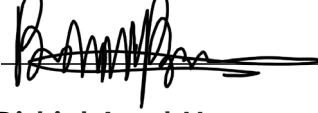
☒ Section 1
 ☒ Section 2
 ☒ Section 3
 ☒ Section 4
 ☒ Section 5
 ☒ Section 6-1

Prepared for use in Project Nomination by:

Thanya Espericueta

District Planning Representative 3/27/2023

Received for use in Project Nomination by:



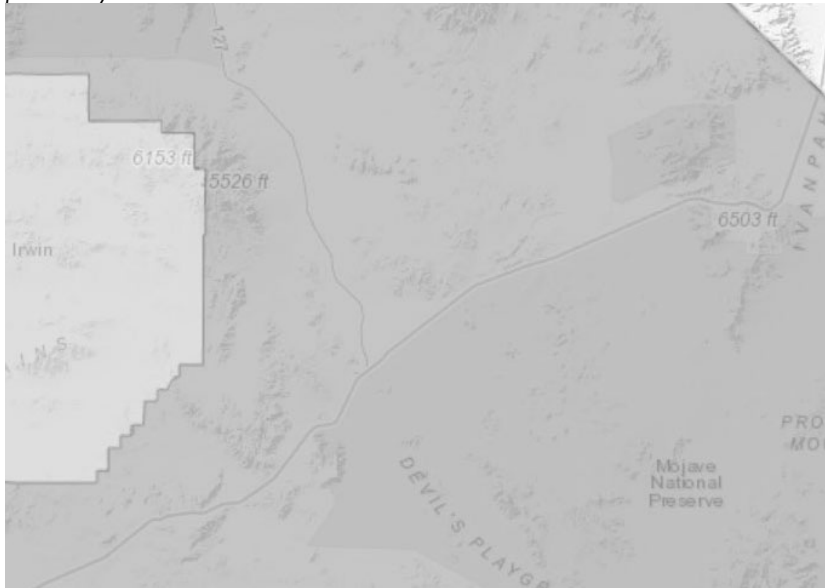
3/27/2023

District Asset Manager **(Date)**

Section 2: Tribal Government Consultation, Local Partners, and Public Engagement Coordination

2-1 TRIBAL GOVERNMENT CONSULTATION – <i>Caltrans Tribal Relations Team; NALB Resource Intranet Page</i>		
2-1-1 Tribal Lands – Is the proposed project: within or near an Indian Reservation, Rancheria, or Tribal Trust Land? <i>NALB Tribal lands Viewer; DEA GIS Library</i> ☐ Yes ☒ No	If so, indicate if: ☐ The project involves trust land(s) (including tribal and individual allotted lands) outside of a reservation or Rancheria ☐ Tribe(s) have been informed of the project and will be coordinated with during project development ☐ All applicable tribal laws and regulations have been reviewed for required coordination	Provide names of TRIBES, TRIBAL GOVERNMENTS, reservations, Rancherias, tribal trust lands. Project is not in or near a Reservation, Rancheria, or Tribal Trust Land.
2-1-2 Does the Tribe have a Tribal Employment Rights Office/Ordinance (TERO) on file? ☐ Yes ☐ No <u>Not applicable</u>	If so, indicate if: ☐ The TERO has been reviewed for required coordination ☐ Is this project on a route identified in the National Tribal Transportation Facility Inventory (NTTFI)? ☐ There is a related Memorandum of Understanding (MOU) between the District and the Tribe ☐ Caltrans has other MOUs with the Tribe; <i>Provide title and description or content</i>	
2-1-3 Have any tribes expressed environmental concerns related to the project? ☐ Yes ☐ No <u>Not applicable</u>	Provide Tribal name(s) and details:	
2-1-4 Have any tribes expressed any other concerns related to the project? ☐ Yes ☐ No <u>Not applicable</u>	Provide Tribal name(s) and details:	
2-1-5 Who are the appropriate points of contact within the Tribe(s) for future coordination and consultation? <u>Not applicable</u>	Name, title, phone number, e-mail:	

Transportation Planning Scoping Information Sheet

2-2 EQUITY CONSIDERATIONS		
2-2-1 Is the project located in or have the potential to affect equity priority communities (also known as disadvantaged or underserved communities)? You can use these links to identify if project is located in DAC area (additional data sources available in guidance): California Healthy Places Index Map CalEnviroScreen 4.0 OEHA	☒ Yes ☐ No ☐ Unknown (Defer to PID)	Describe the communities and any potential impacts. (Consider age groups, income levels, race and ethnicity and potential positive or negative impacts etc.) The project is located in an area with a CalEnviroScreen 4.0 overall percentile score of 75. Additionally, the California Healthy Places Index map indicates that the census tract where the project is located at is in the lower 89% of census tracts with 'healthy conditions' in comparison to other census tracts in the state. Project is not expected to negatively affect disadvantaged communities given that the scope of the project primarily affects wildlife. 
2-2-2 If 2-2-1 is Yes, what are their known mobility needs (consider access to opportunities/destinations)?	☐ Yes ☐ No ☐ Unknown (Defer to PID)	Limited mass transportation options with little to no pedestrian accommodations on local roadways.
2-2-3 Do opportunities exist to incorporate project components that reconnect divided communities, improve equitable access and mobility, or contribute to better public health?	☐ Yes ☒ No ☐ Unknown (Defer to PID)	No opportunities to reconnect divided communities in this project given the project scope and location. However, this project will reconnect areas for wildlife by providing crossing structures/opportunities for wildlife.
2-3 PRELIMINARY PUBLIC ENGAGEMENT	Source/Date Contacted	Additional Information

Transportation Planning Scoping Information Sheet

2-3-1 Which local partner agencies have been identified?		San Bernardino County
2-3-2 Which other stakeholders, community-based organizations, advocates, or interest groups have been identified?		- California Natural Resources Agency, Department of Fish & Wildlife - Brightline West
2-3-3 What is the recommended Public Engagement Strategy for this project?	☒ Inform ☐ Consult	☐ Collaborate ☐ Involve
		☐ No Recommendation
2-3-4 Is the project likely to require translation and interpretation services? https://www.fhwa.dot.gov/civilrights/programs/tile_vi/lep_fourfactor.cfm https://data.census.gov/cedsci/	☒ Yes ☐ No ☐ Unknown (Defer to PID)	Describe. (Include the percentages of LEP individuals in the census tract and their respective languages.)

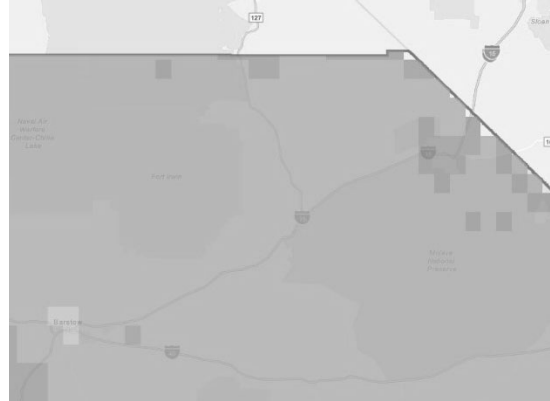
Section 3: Plan and Document Review

3-1 PLANNING DOCUMENTS AND SCOPING TOOLS	SUMMARY OF RECOMMENDATIONS & CONSIDERATIONS
3-1-1 Active Transportation Plans: ☒ California Active Transportation Plan (CAT Plan) ☒ District Bike and Ped Plan ☒ Regional/Local Plan	Bicyclists are not prohibited on I-15 shoulders within most of the project's limits including post miles 117, 130.1, and 168. where the proposed wildlife crossing structures will be located at. While the structures are meant for wildlife, bicyclists may ride on the freeway shoulders through the project limits including under the proposed bridge structures. There are also existing rumble strips within the project limits. To better accommodate the needs of bicyclists, when repaving consider providing intermittent gaps in the rumble strip patterns, (Standard Plan A40H). Intermittent gaps enable bicyclists to maneuver from one side of the rumble strips to the other without having to encounter the milled indentations. This enables bicyclist to move into the travel lane to avoid debris or disabled or stopped vehicles. See TRAFFIC SAFETY BULLETIN 20-07: RUMBLE STRIP GUIDELINES for more details. Additionally, sufficient lighting should be provided under the crossing structures that illuminate the roadway. Illuminating the roadway surface and surroundings enhances the safety of all roadway users and optimizes visibility of bicyclists.
3-1-2 Broadband: ☐ Is there Caltrans-owned broadband infrastructure within this project location?	There is almost no Caltrans owned broadband infrastructure in the area of the three proposed wildlife crossings. Mountain Pass Maintenance Station 1 Mile West of Bailey Road.

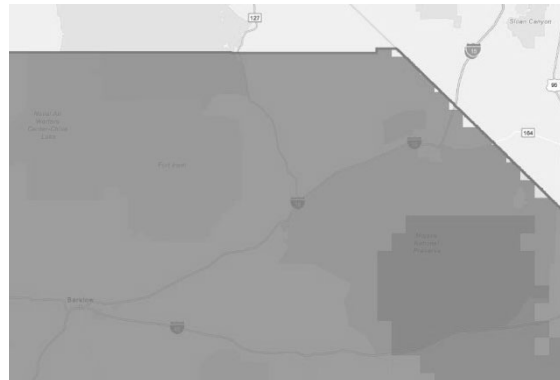
3-1-3 Climate Change Planning:

- ☒ **Caltrans District Vulnerability Assessment**
- ☒ **Caltrans Climate Change Adaptation Priority Plans**
- ☐ **Local Climate Action Plan/GHG reduction plan**
- ☐ **Greenhouse gas section of EIR for RTP/SCS**
- ☐ **Locally Adopted Transportation Adaptation Plan**

The **Caltrans District Vulnerability Assessment** demonstrates the impact climate change could have on transportation facilities. These impacts include wildfire vulnerability, temperature stresses, and precipitation quantities. In the three areas where the wildlife crossings are proposed, there are no wildfire vulnerabilities, as studied through 2070. Temperatures are forecasted to rise 8-13% in the overcrossing areas. Precipitation is forecasted to remain the same or raise up to 4.9%.

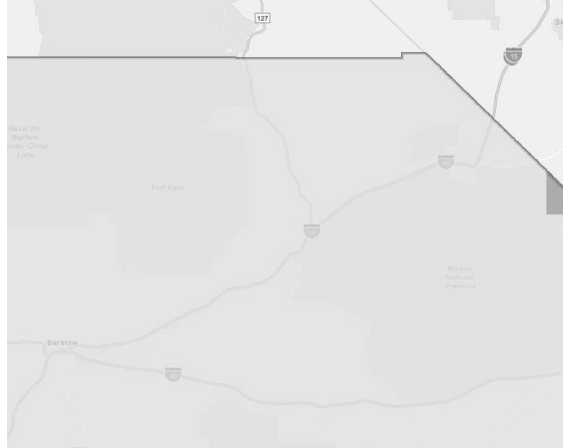


Average Minimum Temperature 2085



Average 7-Day Maximum Temperature 2085

Transportation Planning Scoping Information Sheet



Percent Change 100 Year Plan Precipitation

The **Climate Change Adaptation Priority Plan** for District 8 gives priority to projects, depending on how climate change will affect their integrity. The overcrossing near Clark Mountain has a Priority 1, the overcrossing near Soda Mountain has a Priority 2, and the overcrossing near Cave Mountain has a Priority 1.



Climate Change Adaptation Priority Plan Priorities

3-1-4 Cultural/Historic Preservation Scoping Tools:
☐ Caltrans Cultural Resources Database

There are multiple state owned bridges with historical significance on I-15 within the project limits. See below.

Transportation Planning Scoping Information Sheet

☒ Caltrans Historic Bridge Inventory ☐ Archaeological Site Sensitivity Model ☐ AB52 Letter	
3-1-5 Freight Planning: ☒ California Freight Mobility Plan ☐ California Sustainable Freight Action Plan ☒ Caltrans Safety Roadside Rest Areas (SRRA) ☒ Truck Parking Study ☐ Regional/Local Plan	The California Statewide Truck Parking Study (CSTPS) identifies several segments along I-15 within project limits as ranging from low to high parking demand per mile. This same area is identified as a Priority Truck Parking Area with strategies for consideration including expanding SRRA, building dedicated truck parking facilities within Highway ROW and develop/integrate into the Truck Parking Availability System (TPAS). <i>The Valley Wells SRRA (near Mountain Pass break Check eastbound PM 170.5) and a privately owned truck stop are within project limits and the Clyde V. Kane SRRA (near Baker, CA) is within 10 miles west of project limits.</i>
3-1-6 Project Planning: ☒ District 10 Year Project Book ☐ MONSTER List ☐ Preliminary Investigation/Feasibility Study	The following overlapping projects are planned in the district's 10-Year Project book: SHOPP ID: 19175-PM 160.9-161.5., Roadside Rest Area Rehabilitation
3-1-7 Rail and Mass Transportation Planning: ☒ California State Rail Plan ☐ Statewide Transit Strategic Plan	The California State Rail Plan identifies rail/service to Las Vegas as a proposed passenger rail project/investment. The State intends to support improvements providing connections to Las Vegas services and will coordinate with the

Transportation Planning Scoping Information Sheet

	private project sponsor and local planning authorities to develop detailed operations plans. The State will ensure integration and interoperability between California HSR and Las Vegas services. Additionally, the California Natural Resources Agency has demonstrated support for the project and has also expressed an interest in the Brightline West Rail project contributing to the Wildlife Crossings as mitigation for the project.
3-1-8 Regional & Local Planning: ☒ Regional Transportation Plan ☒ Sustainable Community Strategy ☒ General and Local Plans ☐ Regional Concept of Transportation Operations ☐ Local Coastal Program Plan	SCAG's Sustainable Communities Strategy (SCS) lists "Preserve, enhance and restore regional wildlife connectivity" as one of the strategies/tools the region could use to meet the RTP's vision and goals. Constructing wildlife crossings is in alignment with and will further the regions goals of enhancing wildlife connectivity.
3-1-9 System Planning: ☒ Interregional Transportation Strategic Plan (ITSP) ☐ Corridor Plans (TCR, CSMP, CMCP)	I-15 is considered a priority interregional highway and has some of the highest daily vehicle traffic as well as freight traffic and is expected to increase significantly in the near future. The ITSP is aligned with other plans including the Climate Action Plan for Transportation Infrastructure which has several goals including aligning transportation investments with conservation priorities to reduce transportation's impact on the natural environment. This project to construct wildlife overcrossings would further that goal by minimizing the impact the I-15 has on wildlife movement.
3-1-10 Tribal Planning: ☐ Tribal Transportation Plan	Not applicable
3-1-11 Other (Identify): ☐ _____	

Section 4: Caltrans Stakeholder Information

4-1 TITLE	Name	Phone Number	Email Address
4-1-1 Complete Street/Bicycle and Pedestrian Coordinator	Rena Vergara	(909) 806-3927	Rena.vergara@dot.ca.gov
4-1-2 Climate Change Coordinator/Liaison			
4-1-3 District Native American Coordinator and/or District Cultural Resources PQS Staff (Environmental/Cultural Resources)			

Transportation Planning Scoping Information Sheet

PQS = Professionally Qualified Staff: Caltrans cultural resources staff who meet the Secretary of Interior's Professional Qualifications Standards for Historic Preservation disciplines			
4-1-4 District Native American Liaison (Transportation Planning)	Lorna Foster	(909) 388-7186	Lorna.foster@dot.ca.gov
4-1-5 Environmental Planner			
4-1-6 Freight Planner	Daniel Arellano	(909) 806-2555	Daniel.arellano@dot.ca.gov
4-1-7 Local Development Review (LDR) Planner	Rosa Clark	(909) 806-3923	Rosa.clark@dot.ca.gov
4-1-8 Park and Ride Coordinator	Thanya Espericueta	(909) 806-3926	Thanya.espericueta@dot.ca.gov
4-1-9 Regional Planner	Mark Roberts	(909) 383-4625	Mark.roberts@dot.ca.gov
4-1-10 Sustainable Planning Grant Coordinator	Mark Roberts	(909) 383-4625	Mark.roberts@dot.ca.gov
4-1-11 System Planner	Thanya Espericueta	(909) 806-3926	Thanya.espericueta@dot.ca.gov
4-1-12 Rail & Transit Planner			
4-1-13 Equity, Engagement and Health Planner	Daniel Arellano	(909) 806-2555	Daniel.arellano@dot.ca.gov
4-1-14 Other Coordinators			

Section 5: Climate Change

5-1 CLIMATE CHANGE CONSIDERATIONS	Comment/Action
5-1-1 Using the Caltrans climate change considerations tool kit, identify potential GHG emission and climate change-related mitigation options at the proposed project location. Attach toolkit as an appendix and check GHG reduction measures and climate change-related adaptation measures that could apply to the proposed project for consideration.	Completed Caltrans climate change considerations toolkit has been attached? ☒ Yes ☐ No If no, Describe
5-1-2 Using the District Vulnerability Assessment appropriate for the proposed project area, identify the potential climate stressors that could affect transportation assets within the project limits. Using the vulnerability assessment interactive Webmap; print and attach map of potential project site vulnerability Per the Caltrans D8 Climate Change Vulnerability Assessment, average 7 day maximum temperatures are expected to increase 2-3.9 degrees by 2025, 4-5.9 by 2055, and 8-9.9 by 2085.	☒ Temperature ☐ Precipitation ☐ Wildfire ☐ Other: ☐ Sea-Level Rise ☐ Storm Surge ☐ Cliff Retreat

Transportation Planning Scoping Information Sheet

5-1-3 Are there potential climate risks to major assets within the project area? <i>(e.g. Bridge potentially at risk of SLR inundation, stretch of highway at risk for high temp, and wildfire- consider appropriate materials)</i>	☒ Yes ☐ No	State highway road at risk of high temperatures. D8 Climate Adaptation Priorities Report identifies part of the project limits as a priority 1 for roadways meaning that particular roadway segment is more vulnerable to climate stressors including increasing temperatures. However, this project is not a pavement project where these risks would be appropriate to address. 
5-1-4 Is the project located in the Coastal Zone Boundary, Local Coastal Program Area (https://www.coastal.ca.gov/maps/), or within the San Francisco Bay Conservation and Development Commission (BCDC)? https://bcdc.ca.gov/bcdc-cities-jurisdiction.html.	☐ Yes ☒ No	Describe.

Section 6: Smart Mobility, Active Transportation and Transit

6-1 APPLICABILITY OF CHECKLIST (REQUIRED)	
6-1-1 Is the project located entirely on a facility where bicyclists and pedestrians are legally prohibited and the project does not involve a shared use path, pedestrian/bicycle structure or work impacting a local road crossing or interchange? <i>(i.e. project including freeway mainline and ramp work where the project freeway segment legally prohibits bicyclists and pedestrians per the MUTCD.)</i> If no, continue, if yes, you may stop here. Bicyclists are not prohibited on the I-15 shoulders within the project limits as there is no alternate parallel facility.	☐ Yes ☒ No
6-1-2 Is the primary project purpose to address assets that are outside of the roadbed where pedestrian and bicycle travel is not affected, and construction will not affect future pedestrian and bicycle facilities? <i>(i.e. culvert outfalls, storm water treatment facilities, bridge substructure or scour mitigation, planting or vegetation removal, retaining walls, etc.)</i> Primary project purpose is to construct wildlife crossing structures and fencing. Construction of the wildlife crossing structures will affect bicycle travel as they are allowed on the shoulder and there is no alternate parallel facility. If no, continue, if yes, you may stop here.	☐ Yes ☒ No
6-2 PLACE TYPES (OPTIONAL from here on)	Comment/Action
6-2-1 Identify the Smart Mobility Framework Place Type(s) surrounding the project limits.	☐ Central Cities ☐ Urban Communities ☐ Suburban Communities ☒ Rural Areas ☐ Protected Lands and Special Use Areas
6-2-2 Are there any -existing or proposed- Pedestrian/ Bicyclist/ Passenger Rail/Transit Trip Generators in or adjacent to the project area?	☐ Schools ☐ Town Centers ☐ Shopping Centers ☐ Bus Stops ☐ Large Employment Businesses ☐ Shared-use trail access/parking. ☐ Public Transit /Passenger Rail Facilities ☐ Health/Medical Facilities ☐ Other None
6-2-3 Check all that apply: ☐ the highway segment functions as a “Main Street” or a “Safe Route to School” ☐ the project provides unique or primary access into or out of any of the trip generators or between communities ☐ the project provides unique or primary access across a river, highway corridor or other natural and/or man-made barrier	
6-2-4 Summary of place type related considerations (see Smart Mobility Framework Guide) Add text describing place type considerations.	
6-3 BICYCLE, PEDESTRIAN, RAIL AND TRANSIT CONDITIONS	Comment/Action
6-3-1 Identify existing bicycle and pedestrian facilities within project limits.	☐ Bicycle/Pedestrian Accessibility ☐ Bicycle Lane Choose an item. ☐ Backpacking/Hiking/Equestrian Trail ☒ Shoulder ☐ Curb Ramps ☐ California Coastal Trail ☐ Signage ☐ Green Striping

Transportation Planning Scoping Information Sheet

	☐ Sidewalks ☐ Other:	☐ Bike Boxes ☐ Two-Stage Turn Boxes
6-3-2 Identify physical and/or perceived impediments for bicyclists and pedestrians.	☐ Narrow Shoulders ☐ Narrow Sidewalks ☐ Connectivity Gaps ☐ Curbs and Gutters	☐ Utility Boxes ☒ High Vehicle Speeds ☒ AADT ☐ Other:
6-3-3 Are there any complete streets assets including Bikeways (Class I – IV), Sidewalk, and Crosswalk, in Fair or Poor condition, in the project area?	☐ Yes ☒ No	Describe.
6-3-4 Design Year ADT	☐ <2,500 ☐ 2,500-5,000 ☐ 5,000-10,000 ☒ >10,000	
6-3-5 Posted Speed	☐ 15-20 ☐ 25-30 ☐ 35-40 ☒ >45	
6-3-6 Level of Traffic Stress (LTS)	Bicycle LTS: 4 Pedestrian LTS: 4	
6-3-7 Identify existing Rail and transit facilities within the project vicinity/ corridor.	☐ Rail and Transit Stops ☐ Active Rail/Transit Line ☐ Park and Ride Lot ☐ Connections to other services ☐ Signal Priority ☐ Seamless Transfer Opportunities ☐ Other:	
6-4 BICYCLE, PEDESTRIAN & TRANSIT NEEDS/OPPORTUNITIES	Comment/Action	
6-4-1 Are there opportunities to improve safety for bicyclists and pedestrians with Complete Street features?	☒ Yes ☐ No	There are existing rumble strips within the project limits. To better accommodate the needs of bicyclists, when repaving consider providing intermittent gaps in the rumble strip patterns, (Standard Plan A40H). Intermittent gaps enable bicyclists to maneuver from one side of the rumble strips to the other without having to encounter the milled indentations. This enables bicyclist to move into the travel lane to avoid debris or disabled or stopped vehicles. See TRAFFIC SAFETY BULLETIN 20-07: RUMBLE STRIP GUIDELINES for more details. Additionally, sufficient lighting should be provided under the crossing structures that illuminate the roadway. Illuminating the roadway surface and surroundings enhances the safety of all roadway users and optimizes visibility of bicyclists.
6-4-2 Identify any pedestrian, bicycle or transit needs in/linking to the project area as identified in an existing	The District 8 Active Transportation Plan identifies the project segment as a location based need for bicyclists due to various reasons/conditions including high vehicle speeds, lack of dedicated bicycle facility, high AADT, etc.	

Transportation Planning Scoping Information Sheet

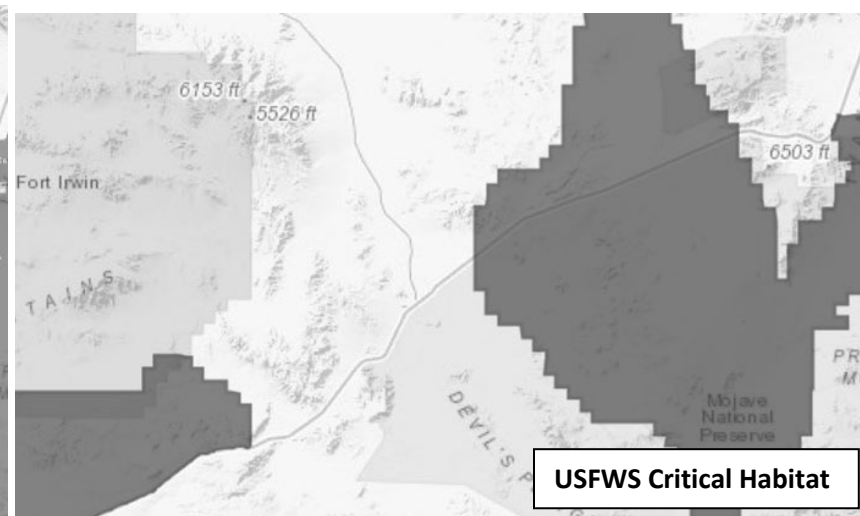
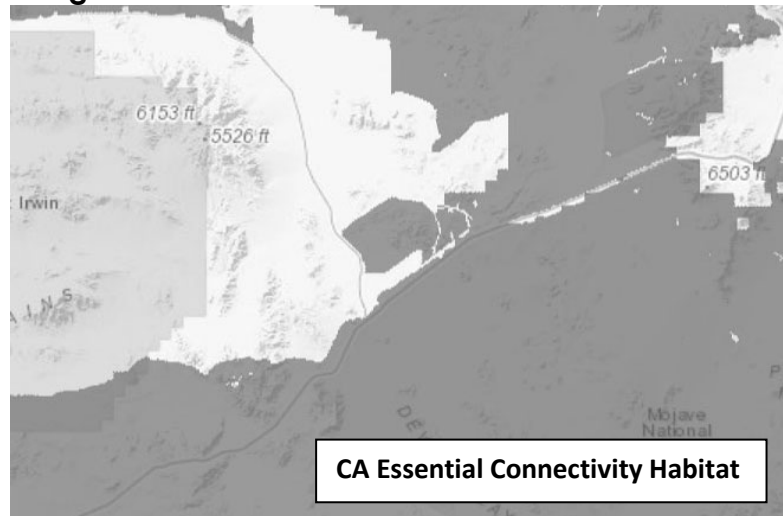
Bicycle/Pedestrian Plan or comprehensive planning study for the corridor.		
6-4-3 Is there a public/partner identified need for bicycle/pedestrian/ transit or “way finding” signs that could be incorporated into the project?	☐ Yes ☒ No	Click or tap here to enter text.
6-4-4 Provide recommendations to address physical and/or perceived impediments for bicyclists and pedestrians (identified in 6-3-2) within project limits”.	☐ Yes ☐ No	Perceived impediments for bicyclists include high vehicle speeds and high AADT in the route including high Truck vehicle traffic. Opportunities to address these impediments are limited because the route is an interstate where dedicated bicycle facilities are not appropriate. Recommendations are limited to maintaining the shoulder in good condition and providing gaps within rumble strips at regular intervals to allow for bicyclists to exit the shoulder in the event that there is debris on the shoulder.
6-4-5 Is there any opportunity to improve transit on state owned roads or improve access to transit?	☐ Yes ☒ No	Click or tap here to enter text.
6-4-6 Preferred Bikeway Facilities	☐ Class I ☐ Class II ☐ Class III ☐ Class IV ☒ Standard Shoulder or Shared Lane	

Section 7: Environmental Linkage Considerations (OPTIONAL)

7-1 AIR QUALITY, WILDLIFE, AND NATURAL HABITAT CONSIDERATIONS

7-1-1 Check all that apply:

- ☒ **Air Quality** – proposed project is located in a Federal non-attainment or attainment maintenance area
- ☒ **Project is within identified Wildlife Corridors in a Habitat Conservation Plan, South Coast Wildlife Linkage or California Essential Habitat Connectivity Plan.**
- ☒ **Proposed project is located within or near any lands protected under a National Scenic Rivers Act, US Fish and Wildlife Services such as Critical Habitat, National Wildlife Refuge System, etc., or within the boundaries of other resource agencies such as HCPs, USFS or BLM designated critical habitat areas or Habitat Conservation Plans**



7-1-2 Are any of the following Officially Designated Habitat Types located within or near the proposed Project Location?

- ☐ Wetlands
- ☐ Riparian or Stream Habitats
- ☐ Jurisdictional Waters
- ☐ Important Bird Areas
- ☐ Important Rare Plants Areas
- ☐ Natural Communities of Conservation Concern
- ☒ **Environmentally Sensitive Habitat Areas – see above**

The project is located within/near UCFFWS critical habitat as well as part of the CA Essential Connectivity Habitat. Additionally, there is suitable habitat for desert tortoise near the project limits.

7-1-3 Is there an identified fish passage barrier(s)? www.cafishpac.org

- ☐ Yes
- ☒ No

Describe.

7-2 ADVANCE BIOLOGICAL MITIGATION OPPORTUNITIES

Comment/Action

7-2-1 Identify Potential Environmental Mitigation Opportunities for the project:

- ☐ Mitigation bank within the project limits with available credits to purchase
- ☐ Mitigation Fees from existing Habitat Conservation Plan
- ☐ Projects timeline allows participation in the Advance Mitigation Program

\$177,000 total estimated cost for Desert Tortoise Mitigation for Soda Mountain Crossing

Transportation Planning Scoping Information Sheet

☐ Any opportunities available within the project limits to offset project impacts	\$188,400 total estimated cost for Desert Tortoise mitigation for Clark Mountain Crossing \$174,000 total estimated cost for Desert Tortoise mitigation for Cady mountain crossing.
--	---

Section 8: System Planning (OPTIONAL)

8-1 ROUTE DESIGNATIONS			
8-1-1 Freeway and Expressway	Freeway	8-1-8 Scenic Highway	Eligible
8-1-2- National Highway System	Yes	8-1-9 National Highway Freight Network	Primary Highway Freight System (PHFS)
8-1-3 Federal Functional Classification	Interstate	8-1-10 Critical Urban Freight Corridor	No
8-1-4 Strategic Highway Network	Yes	8-1-11 Critical Rural Freight Corridor	No
8-1-5 Strategic Interregional Corridor	Southern California - Southern Nevada/Arizona Corridor	8-1-12 NHS and STAA Route Classification	National Network
8-1-6 Interregional Road System	Yes	8-1-13 Truck Network Designation	National Network
8-1-7 Priority Interregional Facility	Yes	8-1-14 Other	
8-2 FACILITY TYPE			
8-2-1 Current	4 MF lanes		
8-2-2 Concept	4 MF lanes		
8-2-3 Ultimate	-		

Section 9: Local Development Review (OPTIONAL)

9-1 LOCAL DEVELOPMENTS IMPACTING PROJECT			
Project Title: Add Title Project Location: Lat/Long or Street address/ County-Route-PM and APN(s) GTS link: Add Link			Encroachment Permit Required ☐
9-1-1 Project Description:			
9-1-2 Distance to Caltrans Project:			
9-1-3 Summary of Mitigation Measures:			
9-1-4 Mitigation Funding Source(s)	9-1-5 Amount of Available Funding	9-1-6 Summary of Caltrans Concerns:	

Transportation Planning Scoping Information Sheet

Section 10: Broadband Considerations (OPTIONAL)

10-1 BROADBAND OPPORTUNITIES (CPUC Map, BMMN Map, Caltrans-owned Broadband Map)	
10-1-1 Is there existing broadband infrastructure (fiber optic cable) available for Caltrans use within the project location?	☐ Yes ☐ No ☐ Unknown (Defer to PID)
10-1-2 If 'Yes', who owns the broadband infrastructure?	☐ Caltrans ☐ BMMN ☐ ISP ☐ Other
10-1-3 If 'No', is there an opportunity for Caltrans to install broadband infrastructure as part of this project?	☐ Yes ☐ No ☐ Unknown (Defer to PID)

Section 11: Freight Considerations (OPTIONAL)

11-1 FREIGHT OPPORTUNITIES AND CONSIDERATIONS	
11-1-1 Are there any known unauthorized truck parking issues or deficiencies along the route?	☒ Yes ☐ No <i>The California Statewide Truck Parking Study (CSTPS) identifies several segments along I-15 within project limits as ranging from low to high parking demand per mile. This same area is identified as a Priority Truck Parking Area with strategies for consideration including expanding SRRA, building dedicated truck parking facilities within Highway ROW and develop/integrate into the Truck Parking Availability System (TPAS).</i>
11-1-2 Are there any existing or planned restrictions/limitations pertaining to truck weight or height?	☐ Yes ☒ No <i>As of drafting this report it is not know if there are any existing or planned restrictions/limitations regarding truck weight or height.</i>
11-1-3 Identify truck usage impacts within the project area: ☐ Truck Bottleneck/Congestion ☐ Distressed Pavement ☐ Truck Geometric Constraints (Truck/Weight/Height restrictions) ☐ Shoulder Width ☐ Shoulder Dust Issues ☐ Bridge Conditions	<i>Truck usage impacts are related to parking availability and undesignated parking whether at SRRAs or otherwise.</i>

Transportation Planning Scoping Information Sheet

11-1-4 Check if apply: ☐ The project area contains Intermodal connections to other freight facilities (sea ports, rail, airport) ☒ Freight key services along route (e.g. agriculture (crops, processing, packing))	<i>The Valley Wells SRRAs (near Mountain Pass) and a privately owned truck stop are within project limits and the Clyde V. Kane (near Baker, CA) is within 10 miles west of project limits.</i>	
11-1-5 Are there any opportunities for Truck Parking, based on SRRAs Master Plan or any relevant truck parking studies?	☒ Yes ☐ No	<i>The CSTPS identifies both SRRAs in or near project limits as At or Over Capacity (>90% usage). A strategy for consideration at these SRRAs is expansion.</i>
11-1-6 Identify opportunities for zero emission fueling (electric charging, hydrogen) for vehicles including trucks.	☒ Yes ☐ No	<i>There may be opportunities for zero emission fueling at the SRRAs in or near project limits, however further study and analysis would be required, and would be outside of the scope for this project.</i>

SEGMENT MAP/PICTURES (OPTIONAL)

Attachment H

RIGHT OF WAY DATA SHEET

M E M O R A N D U M

To: HENRY LAM
Planning – PID Unit

From: CHRISTINE SENTENO
RW Project Coordination

Date: October 25, 2023 Revised
File: 08-SBd 15 R114.0/171.5
Project: Mojave Wildlife Crossings
E.A./P.N.: 1N590/0823000021

We have completed an estimate of the right of way costs for the above-referenced project based on the request received on **April 10, 2023**, and the following assumptions and limiting conditions:

☐ Mapping received did not provide sufficient detail to determine the limits of the right of way requirements and/or to determine damages to the remainder parcels impacted by the project.

☐ Additional right of way requirements may be anticipated but are not defined due to the preliminary nature of the early design requirements.

☐ We have determined that there are no right of way functional involvements in the proposed project at this time as currently designed.

☒ Due to the preliminary nature of the project scope/mapping, utility estimate was provided without the benefit of As-Built maps or potholing.

☒ Other: [Utility relocation and potholing will be completed under Brightline West \(0P400/0P401\). A JUA is needed from AT&T. Easements from BLM is required.](#)

Shorter lead times may lead to additional Right of Way resources, an increased number of eminent domain actions and possibly result in missing the certification date. Any of these actions may reflect adversely on the District's other programs or the Department's and/or District's public image.

*NOTE: THE WORKPLAN WILL BE SENT SEPARATELY AND ARE BASED ON THE INFORMATION PROVIDED WITH THE DATA SHEET REQUEST. IF THERE IS A CHANGE IN SCOPE, A REVISED DATA SHEET AND WORKPLAN WILL BE PROVIDED.

Attachments:

[XX] Right of Way Data Sheet
[XX] Utility Information Sheet
[XX] Railroad Information Sheet
[XX] Government Lands Information Sheet
[XX] M.C.C.E.

EVNT RW	_____
COST RW1 - 6	_____
TEXT TI	_____
SCAN	5/15/23
CLASS	_____
AGRE	_____
TPRC	_____

RIGHT OF WAY DATA SHEET

(Form #)

08-SBd 15 R114.0/171.5

Mojave Wildlife Crossings

1N590K/0823000021

Current 9-Phase Programming: \$ 0.00

1. Right of Way Cost Estimate:

	Value
A. Acquisition, including Excess Lands, Damages, Goodwill, Major Rehabilitation, and Permits to Enter Railroad	\$ 0.00 \$ 0.00
Federal Lands – Special Use	\$ 0.00
B. Acquisition of Offsite Mitigation.	\$ 540,000.00
C. Utility - Relocation (State share) - Potholing	\$ 0.00 \$ 0.00
D. RAP	\$ 0.00
E. Clearance/Demolition	\$ 0.00
F. Title and Escrow Fees	\$ 0.00
G. Project Permit Fees	\$ 111,200.00
H. Condemnation Costs	\$ 0.00
Total R/W Estimate:	\$ 651,200.00

2. Anticipated Date of Right of Way Certification November 1, 2023

3. Parcel Data:

Type	Dual/Appr	Utility Involvement	RR Involvement	No
X _____	_____	U4-1 _____	C&M Agreement	_____
A _____	_____	-2 _____	Svc Contract	_____
B _____	_____	-3 _____	OE Clearances/ Clauses	_____
C _____	_____	-4 _____	LIC/ROE	_____
D _____	_____	U5-7 <u>4</u>		
		-8 _____		
Total Parcels <u>0</u>		-9 _____	Federal Lands	Yes _____
			Number of Parcels	_____

Areas: Right of Way: S.F. _____
 Excess: S.F. _____
 No. Excess Land Parcels: _____

Misc. R/W Work
 RAP Displacement _____
 Clear/Demo _____
 Const Permits _____
 Condemnation _____
 Permits to Enter-ENV _____

RIGHT OF WAY DATA SHEET

(Form #)

08-SBd 15 R114.0/171.5

Mojave Wildlife Crossings

1N590K/0823000021

4. Are there major items of Construction Contract Work?

Yes ____ No X (If yes, explain.)

5. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.).

Type and Number of Parcels: Total Number of Larger Parcels 0

Fee ____

Easements ____

6. Is there an effect on assessed valuation?

Yes ____ Not Significant ____ No X (If yes, explain.)

7. Are utility facilities or rights of way affected?

Yes ____ No X (See attached Utility Information Sheet)

The following checked items may seriously impact lead time for utility relocation:

☐ Longitudinal policy conflict(s).☐ Environmental concerns impacting acquisition of potential easements.☐ Power lines operating in excess of 50 KV and substations.

8. Are railroad facilities or rights of way affected? Yes ____ No X

(See attached Railroad Information Sheet)

9. Were any previously unidentified sites with hazardous waste and/or material found?

Yes ____ None Evident X

(If yes, attach memorandum per R/W Manual, Chapter 4, Section 4.01.10.00.)

10. Are State or Federal rights of way affected?

Yes X No ____ (See attached Government Lands Information Sheet)Agencies Involved: **BLM, National Park, State Land Commissions**Rights/Permissions Required: **Easement**

11. Are RAP displacements required? Yes ____ No X

No. of single family ____ No. of business/nonprofit ____

No. of multi-family ____ No. of farms ____

Based on Draft/Final Relocation Impact Statement/Study dated _____, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

12. Are there material borrow and/or disposal sites required?

Yes ____ No X (If yes, explain.)

13. Are there potential relinquishments and/or abandonments?

Yes ____ No X (If yes, explain.)

14. Are there existing and/or potential Airspace sites?

Yes ____ No X (If yes, explain.)

RIGHT OF WAY DATA SHEET

(Form #)

08-SBd 15 R114.0/171.5

Mojave Wildlife Crossings

1N590K/0823000021

15. Is it anticipated that all Right of Way work will be performed by CALTRANS staff?

Yes X No _____ (If no, discuss.)

Evaluations prepared by:

Right of Way Estimator: STEPHEN HENSLEY, Associate Right of Way Agent

Railroad Coordinator: JOHN RUBALCABA, Associate Right of Way Agent

Utility Coordinator: EDWARD HEWITT, Associate Right of Way Agent

Federal Lands: KRISTINE FLINT, Associate Right of Way Agent

Right of Way Engineering: BRIAN CEBALLOS, Transportation Land Surveyor

Reviewed By:

Marissa Cofer

MARISSA COFER
Project Coordinator
District 8, Right of Way

Date: 04/18/23

Reviewed By:

Christine Senteno

CHRISTINE SENTENO
Senior-RW Agent, Project Coordination
District 8, Right of Way

Date: 04/18/2023

I have personally reviewed this Right of Way Data Sheet and all supporting information. I certify that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set forth, and I find this Data Sheet complete and current.

Susan Esparza

SUSAN ESPARZA
Project Delivery Manager
District 8, Right of Way

Date: 04/18/2023*Rebecca Guirado*

REBECCA GUIRADO,
Deputy District Director
District 8, Right of Way and Land Survey

Date: 04/18/2023

REVISIONS			APPROVAL	
No.	Date	Reason for Revision	Project Coordinator	Sr. RW Agent
1	5/2/2	Added util relocation and potholing costs.	MC	<i>CS</i>
2	5/4/23	Removed utility relocation and potholing costs.	MC	<i>CS</i>
3	5/15/23	Added MCCE costs	MC	<i>CS</i>

RIGHT OF WAY DATA SHEET

(Form #)

08-SBd 15 R114.0/171.5

Mojave Wildlife Crossings

1N590K/0823000021

This utility estimate was prepared using “project specific” data and unit values. This information is not to be utilized for the updating or preparation of this, or any other Right of Way Cost Report or Utility Information Sheet.

UTILITY INFORMATION SHEET

1. List of utility companies in the project area:
KINDER MORGAN ENERGY PARTNERS, MCI (VERIZON BUSINESS), SPRINT, FRONTIER,
2. Type and name of utilities in conflict and agreements required.
3. Is any facility a longitudinal encroachment in existing or proposed access controlled right of way?
Explain: N/A

Disposition of longitudinal encroachment(s):

- ☒ None
☐ Relocation required.
☐ Exception to policy needed.
☐ Other. Explain

4. Additional information concerning utility involvement on this project. Is there any special circumstances/facilities requiring additional lead time?
5. Potholing costs: \$_____

Total estimated cost of State's obligation for utility relocation on this project:
(Phase 9 funding) \$_____

Facility Owner	Type of Relocation (facility)	Quantity (ie., LF of waterline, # of manholes, # poles, etc)	Cost of Each relocation	Total Cost of relocations	Estimated Grand Total including contingency
N/A	N/A	N/A	N/A	N/A	N/A

Utility Involvement

- U4-1____ total number of expected owner expense involvements
 -2____ total number of expected State expense involvements-conventional highway, no Federal aid
 -3____ total number of expected State expense involvements-freeway, no Federal aid
 -4____ total number of expected State expense involvements-conventional or freeway, with Federal aid
 U5-7 4____ total number of expected utility verifications, which will not result in involvements
 -8____ total number of expected utility verifications, 50% which will result in involvements, and 50% will not
 -9____ total number of expected utility verifications, which will result in involvements

RIGHT OF WAY DATA SHEET

(Form #)

08-SBd 15 R114.0/171.5
Mojave Wildlife Crossings
1N590K/0823000021

Prepared By: Edward Hewitt
Edward Hewitt
Right of Way Utility Estimator

Date: 04/17/2023

Reviewed By: Vincent Lundblad
VINCENT LUNDBLAD
Senior Right of Way Agent, Utilities

Date: 04/17/2023

RIGHT OF WAY DATA SHEET

(Form #)

08-SBd 15 R114.0/171.5

Mojave Wildlife Crossings

1N590K/0823000021

FEDERAL LANDS INFORMATION SHEET

Are Federal Lands involved?Yes ☒ No ☐ (If "Yes," provide the following information.)

Agencies Involved:

_____ Army Corps of Engineers	_____ GSA	_____ US Postal Service
_____ BIA	_____ ☒ National Parks	_____ Veterans Administration
_____ ☒ BLM	_____ US Fish & Wildlife	_____ ☒ Other <u>State Lands Commission</u>
_____ Dept. of Parks & Recreation	_____ US Forest Service	_____ Other _____

Rights/Permissions Required:

_____ Cooperative Work Agreement	_____ Letter of Concurrence	_____ Right of Way Grant
_____ Cost Recovery	_____ Letter of Consent	_____ Special Use Permit
_____ Courtesy Letter	_____ Mineral Agreement	_____ Timber Sale
_____ ☒ Easement	_____ Perfection of Title	_____ Transfer of Jurisdiction
_____ Highway Easement	_____ Right of Entry	_____ Other _____

9-Phase Cost Anticipated (if any) _____

Explanation:

Remarks:

Location #1, PM 130.5, BLM and NPS are affected. State has rights as shown in A67435-01.

Location #2, PM 168.5, BLM and SLC are affected. State has rights as shown in A66401-01.

Additional Right of Way will be needed, State will seek Federal Land Transfer/Easement.

Location #3, PM 117.0, no federal lands affected.

Prepared By: Kristine Flint

KRISTINE FLINT

Right of Way Federal Lands Coordinator

Date: May 10, 2023Reviewed By: 

ADEE ARPON

Senior Right of Way Agent, Acquisitions

Date: 5/10/2023

RIGHT OF WAY DATA SHEET

(Form #)

08-SBd 15 R114.0/171.5

Mojave Wildlife Crossings

1N590K/0823000021

RAILROAD INFORMATION SHEET

1. Describe railroad facilities or rights of way affected.
Per the scope of work, there is no railroad involvement anticipated. There is no railroad in the vicinity.
2. When branch lines or spurs are affected, would acquisition and/or payment of damages to businesses and/or industries served by the railroad facility be more cost effective than construction of a facility to perpetuate the rail service? Yes ____ No **X** (If yes, explain.)
3. Discuss types of agreements and rights required from the railroads. Are grade crossings requiring service contracts, or grade separations requiring construction and maintenance agreements involved?
None
4. Remarks (non-operating railroad right of way involved?):
None
5. 4-Phase Cost: \$ **0**
Explanation: (Flagging)

9-Phase Cost: \$ **0**
Explanation: (ROE, Svc Contract)
6. PMCS Input Information

RR Involvement	<u>No</u>
C&M Agreement	_____
SVC Contract	_____
OE Clearances/ Clauses	_____
LIC/ROE	_____

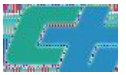
Anticipated Lead time: **No additional anticipated lead time**

Prepared By: *Lyndsay Campanella*
FOR: JOHN RUBALCABA
Right of Way Railroad Coordinator

Date: 04/13/2023

Reviewed By: *Aidee Arpon*
AIDEE ARPON
Senior Right of Way Agent, Acquisitions

Date: 4/13/2023



Mitigation and Compliance Cost Estimate (MCCE)

PART 1 - PROJECT INFORMATION

DIST-CO-RTE: 08 - SBD - 015 **PM/PM:** R114.000/R171.500

EA/Project Number: 08-1N590_ / 0823000021

Project Name: I-15 MOJAVE WILDLIFE CROSSINGS

Form Completed by: Tyrha Delger

Project Manager: NAGUIB, NADER N **Phone:**

Date: 7/27/2023

MCCE Phase prepared for: DED

PART 2 - ENVIRONMENTAL COMMITMENTS FOR PERMANENT IMPACTS

Environmental Commitments for Alternative:

Commitment	Design \$	FY	Ac/Crd	ROW \$ Planned	FY	ROW \$ Actual	Pd	Construction \$	FY
Biological									
CSB 146002							☐	\$133,565	24/25
DT Temp Fencing 803210							☐	\$213,704.7	24/25
Temp High Vis Fence 160110							☐	\$70,902.42	24/25
JD Task Order	\$24,000	23/24					☐		
Desert Tortoise Mitigation			17.98	\$539,400	23/24		☐		

PART 3 - PERMITS AND AGREEMENTS

Permit/Agreement	ROW \$ Planned	FY	ROW \$ Actual	Pd	Construction \$	FY
1600	\$12,472	24/25		☐		
401	\$78,702	24/25		☐		
TOTAL	\$24,000		\$630,574		\$418,172.12	

Approved by:

ANDREW WALTERS

Environmental Branch Chief (Print Name)

Andrew M. Walters

Signature

8/02/2023

Date

If Right of Way Capital is needed:

Christine Senteno

Right-of-Way Office Chief (Print Name)

Christine Senteno

Signature

10/19/2023

Date

If cultural and biology mitigation totals more than \$500,000:

Craig Wentworth

Environmental Office Chief (Print Name)

Craig Wentworth

Signature

8/02/2023

Date

Date

Submitted to PM on:_____ Initial____

Comments (explanation and risk management plan attached)

401 permit: impacts temp:3.1+perm 0.13= 3.23 acres of impacts. Fee= \$78,702.00

1602 permit fee two locations: each project cost more than \$350,000. 2X \$6,236.00= \$12,472.00

Contractor Supplied Biologists:

300 contract working days, Part time monitoring: 1Xweek is 60 days of monitoring, \$1,495.0 daily monitoring cost

1 Preconstruction Meeting: 41,495

9 preconstruction survey days (birds, plants, other species, 3 days per bridge, 9 days total): \$13,455.0

1 WEAP training: \$1,495

1 day to prepare training materials: \$1,495

5 days to install temporary dt fencing (1 day per 4000 feet): \$7,475

3 days to install ESA high vis fencing (1 day per 6000 feet): \$4,485

2 days for wildlife fence removal (1 day per 10,000 feet): \$2,990

60 days periodic monitoring: \$89,700

1 day to review CCOs: \$1,495

2 days to prepare reports: \$2,990

\$50 report production cost

2 days for misc expenses including off site meetings: \$2,990

Total: \$133,656

Project Footprint Estimates were taken from the 03/2023 KMZ files that showed Bridge Footprint and DWF lengths

Desert Tortoise Temporary Fencing: \$11/linear foot. Based on surveys only needed on Eastbound Cady and Soda Mountain and Westbound Clark Mountain.

Cady: 5,599.1 feet

Soda: 7,822.5 feet

Clark: 6006.1 feet

Total: 19,427.7 feet and \$213,704.7

Temporary High Visibility Fencing: \$5.65/linear foot

Only needed at Clark Mountain

12,549.1 linear feet, \$70,902.42

Memorandum

*Making Conservation
a California Way of Life.*

To: CHRISTINE SENTENO
BRANCH CHIEF
OFFICE OF PROJECT COORDINATION

Date: April 10, 2023

File: 08-SBd-15 PM R114.0/171.5
I-15 Mojave Wildlife Crossings
EA 1N590
Project ID No: 0823000021
Program:

From: MINDY BUI *AMB*
Branch Chief
Pre-Programming/Engineering Studies

Subject: REQUEST FOR RIGHT OF WAY DATA SHEET

Planning Unit is preparing a Project Initiation Report (PIR) for the above-referenced project. The project scope consists of constructing vegetated wildlife crossings and fencing in the Mojave Desert at three locations along Interstate 15 (I-15) near Cady Mountain (PM R116.70), Soda Mountain (PM R129.75), and Clark Mountain (PM 168.05).

Additional Right of Way will be required. Please provide the Right of Way Data Sheet by April 17, 2023.

If you have any questions or need additional information, please contact Henry Lam at 909-963-9574.

Attachments:

- (1) Location Map
- (2) Layouts and Cross-sections
- (3) Right of Way Data Sheet Request Form
- (4) Utility Data Assessment Form
- (5) Project Initiation Proposal (PIP)

Attachment I

COMPLETE STREETS DECISION DOCUMENT (CSDD)

Complete Streets Decision Document (CSDD)

- 1) Is the project located entirely on a facility where bicyclists and pedestrians are legally prohibited and the project does not involve a shared use path, pedestrian/bicycle structure or work impacting a local road crossing or interchange? (For example, a project including freeway mainline and ramp work, not including the ramp connection with the minor road, where the project freeway segment legally prohibits bicyclists and pedestrians.)

☒ NO - Proceed to Question 2
☐ YES - Stop here. The project is exempt from further complete streets evaluation. Sign and attach to the Project Initiation Document (PID).

- 2) Is the primary project purpose to address assets that are outside of the roadbed where pedestrian and bicycle travel is not affected, and proposed project will not affect future pedestrian and bicycle facilities? Examples may include culvert outfalls, storm water treatment facilities, bridge substructure or scour mitigation, planting or vegetation removal, retaining walls, etc.

☐ NO - Continue to Question 3
☒ YES - Stop here. The project is exempt from further complete streets evaluation. Sign and attach to PID.

- 3) Has a Transportation Planning Scoping Information Sheet (TPSIS) been completed for this project?

☐ NO – Proceed to Question 4
☐ YES – Skip to Question 5 (Note: TPSIS is attached to the PID)

- 4) Which of the following planning documents were consulted to determine bicycle, pedestrian or transit needs? Select all that apply and proceed to Question 5.

- ☐ a. District Active Transportation Plan
☐ b. Other Caltrans or local/regional agency bike/ped/transit/safe routes to school plans
☐ c. ADA Transition Plan/Grievances (consult with the District ADA Coordinator)
☐ d. Corridor planning documents
☐ e. Other (list here) _____

- 5) Based on the reviews completed in Question 4 or identified in the TPSIS, after a review of the roadway geometrics, or identified by the PDT, are there any bicycle, pedestrian, or transit needs, deficiencies or opportunities for improvement identified for the project location?

☐ NO – Provide brief description of findings: _____
Stop here. The project meets the requirements for consideration of Complete Streets elements. Sign and attach to the PID.
☐ YES – Describe them here and proceed to Question 6: _____

- 6) Based on the needs identified in Question 5, what would be the preferred complete streets elements to address those needs (e.g. road diet, separated bikeway, reconstructed sidewalk, etc.)? Resources include the Complete Streets Elements Toolbox, the Contextual Guidance for Bikeway Facility Selection, the Bikeway Facility Selection Guidance Memorandum, etc. List them in the table below and provide a rough estimated cost to construct preferred project complete streets elements (including right-of-way and support costs) and proceed to Question 7.

FACILITY TYPE	UNIT	QUANTITY	ESTIMATED TOTAL COST

- 7) Was there any known public and stakeholder opposition to any preferred complete streets elements identified for the project? Provide response and proceed to Question 8.

_____ NO
 _____ YES – Describe the opposition position here: _____

- 8) Does the programmable project alternative/project scope include all the complete streets elements identified in Question 6?

_____ NO - Proceed to Question 9
 _____ YES - Stop here. The project has met the requirements for consideration of complete streets elements. Sign and attach to PID.

- 9) Does the project include any of the complete streets elements that are identified in Question 6? Or are there any proposed incremental improvements related to the complete streets elements in Question 6? Provide response and proceed to Question 10.

_____ NO – The programmable project alternative does not include any complete streets elements, and therefore does not address identified needs for complete streets elements.
 _____ YES – List them here:

FACILITY TYPE	UNIT	QUANTITY	ESTIMATED TOTAL COST

- 10) Does the project funding have constraints that would preclude the ability to incorporate additional complete streets elements into the project (For example, cannot combine funding with other sources.)? Provide response and proceed to Question 11.

_____ NO
 _____ YES – Describe the constraints here: _____

- 11) Provide a rationale and justification for not including all the recommended complete streets elements into the project: (Consider the engineering justification, right-of-way constraints, environmental impacts, etc.). _____

Prepared by:



Henry Lam, PID Preparer in responsible charge
Planning

Concurred by:



Alexa Pok
District Complete Streets Coordinator

03/28/2023

Date



AMB Ray Desselle
Deputy District Director, Planning

04/03/2023

Date



CQ Mahmuda Akhter
Acting Deputy District Director, Design

04/05/2023

Date



Catalino A. Pining III
District 8 Director

4/7/2023

Date

Distribution: Attach completed original CSDD to PID and email to HQ Division of Design at CSDD@dot.ca.gov

Revalidation of CSDD at PA&ED

Does the project scope defined in the project approval document include the complete streets elements identified in Question 6 or 9 of this CSDD and the PID?

____ NO – Prepare a Superseding CSDD (answer Questions 1 through 11) replacing the original CSDD, obtain all certified and concurrence signatures below, and attach the superseding CSDD to the project approval document. Email superseding CSDD to HQ Division of Design at CSDD@dot.ca.gov.

X YES – Certify there are no changes to the scope of complete streets elements with only the project engineer certification signature below on the original approved CSDD and attach the CSDD to the project approval document. Email revalidated CSDD to HQ Division of Design at CSDD@dot.ca.gov.

Certified by:



Ha Vu
Project Engineer, Design

7/26/2023

Date

Concurred by: *(Include concurrence signatures only if a Superseding CSDD is prepared.)*

Name
District Complete Streets Coordinator

Date

Name
Deputy District Director, Planning

Date

Name
Deputy District Director, Design or
Division Chief, Design/Project Development

Date

Name
District Director

Date

Revalidation of CSDD at PS&E

Does the project scope designed in the plans, specifications and estimate include the complete streets elements identified in Question 6 or 9 of the CSDD (or Superseding CSDD, if applicable) certified at the PA&ED revalidation and the project approval document?

_____ NO – Prepare a Superseding CSDD (answer Questions 1 through 11) replacing the CSDD that was approved at PA&ED revalidation, obtain all certified and concurrence signatures below, and attach to the Supplemental PR. If a Supplemental PR is not required, place in the project history file. Email superseding CSDD to HQ Division of Design at CSDD@dot.ca.gov.

_____ YES – Certify there are no changes to scope of complete streets elements in the project, and that temporary bike and pedestrian facilities during construction have been considered. Include only the project engineer certification signature below on the CSDD that was approved at PA&ED revalidation and place the CSDD in the project history file. Email revalidated CSDD to HQ Division of Design at CSDD@dot.ca.gov.

Certified by:

Name, Project Engineer
Branch/Company

Date

Concurred by: *(Include concurrence signatures only if a Superseding CSDD is prepared.)*

Name
District Complete Streets Coordinator

Date

Name
Deputy District Director, Planning

Date

Name
Deputy District Director, Design or
Division Chief, Design/Project Development

Date

Name
District Director

Date

Attachment J

CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM (rev. 06/2022)**

Project Information

Project Name (if applicable): I-15 MOJAVE WILDLIFE CROSSINGS

DIST-CO-RTE: 08-SBD-15

PM/PM: 114.0/171.5

EA: 08-1N5900

Federal-Aid Project Number: N/A

PN: 0823000021

Project Description

This project is located along Interstate 15 (I-15) from Post Mile (PM) R114.0 to PM 171.5. It is proposed to construct wildlife crossings and directional fencing at three locations near Cave Mountain (also known as Cady Mountain) (PM R116.70), Soda Mountain (also known as ZZYZX) (PM R129.75), and Clark Mountain (PM 168.05).

Caltrans CEQA Determination (Check one)

☐ **Not Applicable** – Caltrans is not the CEQA Lead Agency

☐ **Not Applicable** – Caltrans has prepared an IS or EIR under CEQA

Based on an examination of this proposal and supporting information, the project is:

☒ **Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)

☐ **Categorically Exempt. Class** Enter class. (PRC 21084; 14 CCR 15300 et seq.)

☐ No exceptions apply that would bar the use of a categorical exemption (PRC 21084 and 14 CCR 15300.2). See the [SER Chapter 34](#) for exceptions.

☐ **Covered by the Common Sense Exemption.** This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3].)

Senior Environmental Planner or Environmental Branch Chief

Andrew Walters

Print Name



Signature

10/16/2023

Date

Project Manager

Nader Naguib

Print Name



Signature

10/16/2023

Date



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM (rev. 06/2022)**

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Caltrans CEQA Determination (Check one)

Caltrans NEPA Determination (Check one)

☐ **Not Applicable**

Caltrans has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). See [SER Chapter 30](#) for unusual circumstances. As such, the project is categorically excluded from the requirements to prepare an EA or EIS under NEPA and is included under the following:

☒ **23 USC 326:** Caltrans has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to 23 USC 326 and the Memorandum of Understanding dated April 18, 2022, executed between FHWA and Caltrans. Caltrans has determined that the project is a Categorical Exclusion under:

☐ **23 CFR 771.117(c): activity (c)(Enter activity number)**

☐ **23 CFR 771.117(d): activity (d)(Enter activity number)**

☒ **Activity 3 listed in Appendix A of the MOU between FHWA and Caltrans**

☐ **23 USC 327:** Based on an examination of this proposal and supporting information, Caltrans has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION
DETERMINATION FORM**

Senior Environmental Planner or Environmental Branch Chief

Andrew Walters

Print Name

Andrew M. Walters

Signature

10/11/2023

Date

Project Manager/ DLA Engineer

Nader Naguib

Print Name

Nader Naguib

Signature

10/11/2023

Date

Date of Categorical Exclusion Checklist completion (if applicable): 06/28/2023

Date of Environmental Commitment Record or equivalent: 10/02/2023

Briefly list environmental commitments on continuation sheet if needed (i.e., not necessary if included on an attached ECR). Reference additional information, as appropriate (e.g., additional studies and design conditions).



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Continuation sheet:

Project Description (Continued):

The bridges are proposed to be two-span cast-in-place/prestressed concrete box girder structures with openings for the existing NB and SB I-15 lanes and the future BLW rail in the median. A precast arch structure design variation option will be explored during design and may be utilized as a potential means to reduce costs.

The bridges are proposed to be 100 ft wide, 240 ft to 400 ft long, and the spans will accommodate space for one additional future travel lane in each direction. Railing and fencing will be installed at the edges of the bridges and directional fencing will also be installed at various lengths along the access control line to direct wildlife to the crossings. The limits of this fencing will be based on recommendations from wildlife experts. The surface of the bridges will be composed of native materials to match the characteristics of the surrounding areas. The approach grades to the structures and other measures will be utilized to preclude use of the crossings by off-highway vehicles and other non-wildlife users. Escape ramps for bighorn sheep that inadvertently wander into the freeway right-of-way and cameras to monitor crossing use will also be incorporated. Unpaved access roads and locked gates will permit Department maintenance forces to inspect and maintain the structures.

After construction the project will monitor wildlife usage of each crossing to document the effectiveness of the structures in terms of number of animals that use the structures to safely cross over I-15 at each location, changes in wildlife mortality at the three crossing locations, and ability of bighorn sheep to adapt to the newly constructed crossing structures and associated escape/diversion mechanisms and mitigation measures.

The project has a total estimated project cost of \$132,395,000, funded in fiscal year 2023/2024 under the SHOPP 201.999 program, FTIP ID # SBD230801; RTP ID # REG0701. The FTIP project description is as follows: "in San Bernardino County near Baker at various locations; construct wildlife crossings and fencing in the Mojave Desert at three locations along Interstate 15 near Cave Mountain, Soda Mountain, and Clark Mountain".

Please see **Figure 1** for a **Project Location Map**.



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Purpose and Need:

Purpose:

The purpose of this project is to restore wildlife connectivity by constructing bridges across Interstate-15 (I-15) in the vicinity of Soda Mountain, Cave Mountain, and Clark Mountain Pass in San Bernardino County to function as wildlife crossings. The dedicated wildlife crossings will provide safe and sustainable passages for bighorn sheep and other wildlife across I-15 that restores bighorn sheep wildlife connectivity and allow for the safe movement of animals, and the exchange of genetic material. The project will assist in restoring and enhancing wildlife connectivity among metapopulation fragments of bighorn sheep and facilitate crossing of the I-15 of other species.

Need:

The need for the proposed project is based on desert bighorn sheep genetic and tracking data that demonstrates I-15 is a movement barrier for sheep that have historically traveled between the northern mountain ranges and southern mountain ranges. While there are several undercrossings (washes and large box culverts) present throughout the I-15, data shows desert bighorn sheep are less likely to move through these structures, unlike other medium and large mammals such as bobcats and mountain lions. Like other large mammals, desert bighorn sheep need large, connected habitats to breed and thrive. I-15 divides the previously connected ranges into isolated habitat fragments. This decreases desert bighorn sheep genetic diversity, increases inbreeding, and increases territorial disputes amongst males. The fragmentation of habitat currently forces desert bighorn sheep to cross over I-15, increasing risk of vehicular crashes and desert bighorn sheep fatalities. From 2007 to 2020, at least 59 desert bighorn sheep were killed by vehicles in California. Dedicated wildlife crossings are needed to restore wildlife connectivity.

Stakeholder Outreach:

Caltrans has worked closely with the California Department of Fish and Wildlife (CDFW) and Oregon State University (OSU) to determine the best locations for these wildlife overcrossings. Coordination has been ongoing since 2021 to assess data, get recommendations on overcrossing locations, and determine how to construct the overcrossings to entice bighorn sheep to use them. Other agencies and organizations including the Bureau of Land Management (BLM), National Park Service - Mojave National Preserve, US Fish and Wildlife Service (USFWS), and local conservation groups including but not limited to The Nature Conservancy, the Society for the Conservation of Bighorn Sheep, and the Mojave Desert Land Trust have been engaged to gain input, assistance, and support of the overcrossings.



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

As part of the overall project development and Environmental efforts, Caltrans, CDFW, and Brightline West are conducting regular Stakeholder Outreach meetings that began April 12, 2023, to engage various federal and non-government organization (NGO) stakeholders. These include the National Parks Conservation Association, CA Chapter Wild Sheep Foundation, Defenders of Wildlife, Mountain Lion Foundation, Mojave National Preserve Conservancy, NPS, and BLM. The NPS has voiced support for the overall wildlife crossing effort. It is currently planned to continue outreach meetings throughout the life of the project. In addition, Caltrans has set up a project website to further engage and provide updates to agencies, the public, and other interested parties on topics such as the development of bridge aesthetics.

Technical Summaries:

Land Use

The project area includes lands designated for transportation use. The project does not propose to convert or encroach on the surrounding land uses. All work will occur within the existing Caltrans Right of Way. However, Caltrans will acquire a 40-foot easement at Clark Mountain from the BLM for the purposes of maintaining a deferred frontage road on the north side of I-15. No land use impacts are anticipated.

Coastal Zone

The project is not located in a coastal zone.

Wild and Scenic Rivers

The project is not located near a designated Wild and/or Scenic River.

Biological Resources

In coordination with District Biology, a Natural Environment Study (NES) was completed for this project in July 2023 and updated in September 2023. Habitat assessments were conducted for rare plants and desert tortoise in April of 2023. No special-status wildlife species were incidentally detected during the habitat assessments. Temporary indirect disturbance (such as noise, dust, and human encroachment) from construction may occur from project activities. Due to the scope of the project, the presence of three new bridge structures will remove habitat, specifically for plant species. However, they are being designed and built specifically to facilitate wildlife movement, which includes desert bighorn sheep, across the I-15. The construction of these bridges will provide more improvements to habitat than it will impact.



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

The project includes avoidance and minimization measures to avoid and minimize potential impacts. These measures include but are not limited to: the presence of a qualified on-site biological monitor; pre-construction desert tortoise clearance surveys; installation of temporary desert tortoise exclusion fencing; and cessation of Project activities should a desert tortoise be observed until such time as the Caltrans biologist is contacted and guidance can be provided by the resource agencies (USFWS and CDFW). A full list of conservation measures can be found in the Environmental Commitment Record.

Pursuant to Section 7(a)(2) of the Federal Endangered Species Act (FESA), Caltrans has determined that the project will have a “*May Affect, Likely to Adversely Affect*” determination for Desert Tortoise (*Gopherus agassizii*), and a “*No Effect*” determination for its associated Designated Critical Habitat. The project will have a “*No Effect*” determination for other federally listed species or USFWS-designated Critical Habitats. Formal Section 7 consultation with the USFWS has been conducted and USFWS concurrence with the Desert Tortoise Programmatic Biological Opinion has been obtained.

The project qualifies for a Statutory Exemption under CEQA. However, ongoing coordination with CDFW under the Statutory Exemption for Restoration Projects (SERP) program will determine which permits are required.

Caltrans has determined that there will be “*No Take*” to state listed species Mohave tui chub (*Siphateles bicolor mohavensis*), Least Bell’s vireo (*Vireo bellii puillus*), gilded flicker (*Colaptes chrysoides*), desert tortoise (*Gopherus agassizii*), and candidate listed species Joshua tree (*Yucca brevifolia*) pursuant to CESA, due to lack of suitable habitat and/or with implementation of avoidance and minimization measures, including measures specified in the Desert Tortoise PBO. The project is anticipated to require a CDFW/CFGC Section 1602 permit, a USACE/CWA Section 404 Nationwide Verification, and a RWQCB/CWA Section 401 permit. A CDFW/CFGC Section 2081 permit may be required. Compensatory mitigation will be required to mitigate impacts on desert tortoise and jurisdictional waters. Avoidance and minimization measures will be required to avoid potential impacts to other federally listed as ‘threatened’ or ‘endangered’ species or State candidate rare, threatened, or endangered species.

Parks and Recreational Facilities

There are no Parks or Recreational facilities within the project footprint. The project will not convert parks or recreational facilities to another use or impede the public’s access to them. The closest such properties are the Mojave National Preserve, located south of the Clark Mountain crossing location outside Caltrans ROW, and the Hollow Hills Wilderness,



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

located north of Baker and Clark Mountain. No impacts to parks and recreational facilities are anticipated.

There are designated BLM Off Highway Vehicle (OHV) routes in proximity to the project footprint. However, these facilities do not cross the project footprint at any of the three project locations, and the proposed crossings will not provide or impede access to adjacent OHV facilities. The wildlife crossing bridge decks will also include features such as boulders, logs, and other features to preclude their use by OHV or other recreational users.

Farmlands/Timberlands

The project does not propose to disturb, convert, or acquire any farmlands or timberlands. There are no farmlands under protection of the Williamson Act, Prime Farmlands, or Farmlands of Statewide Importance in the project area. No impacts to farmlands or timberlands are anticipated.

Growth

The project does not propose to add capacity to the existing facilities and is not being proposed in response to or in anticipation of growth and development. The project will not remove obstacles to growth, result in the need to expand public services, foster population growth, encourage or facilitate economic effects, promote development, or involve a precedent-setting action. There will be no growth inducing effects of the proposed project. No impacts to growth are anticipated.

Community Impacts

The project area is very lightly populated, with no residential or commercial development of any kind. A minor amount of right of way would be acquired from BLM through Federal land transfer at the Clark Mountain location to accommodate maintenance of deferred frontage access. The project does not propose any residential or businesses relocations, or any real property acquisitions. No community impacts are anticipated; no Community Impact Assessment (CIA) is required.

Utilities/Emergency Services

No impacts to utilities are anticipated. However, AT&T has a corridor that cross in proximity to the project footprint that may require minor relocation / undergrounding. The need for utility relocations will be determined during final design/construction. A Traffic Management Plan will address any potential impacts to emergency services.

Traffic and Transportation/Pedestrian and Bicycle Facilities



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

The project would construct three wildlife crossings over an existing freeway. No permanent traffic impacts will occur. No effect on existing pedestrian or bicycle facilities will occur. Construction of these bridges will require temporary detours into the median of I-15 and shoulder closures. A Traffic Management Plan will be developed to address temporary traffic impacts. A Public Information/Public Awareness Campaign, Incident Management and Construction Zone Enhanced Enforcement Program (COZEEP) will be prepared.

Visual/Aesthetics

A Visual Impact Assessment (VIA) was prepared for the project on August 24, 2023. The purpose of the VIA is to document potential visual impacts caused by the proposed project and propose measures to lessen any detrimental impacts that are identified. It is also intended to help guide decisions on the aesthetic treatments to be included on bridge elements, such as color, texture, and patterns, consistent with the Brightline West Project's Project Aesthetic and Landscape Masterplan (PALM).

The project will be designed to visually blend with the adjacent landscape. Bridge walls will include textured panels that will provide aesthetic interest, as well as work as noise barriers. Exposed fencing and railings will be stained earth tones to blend into the landscape. Native desert planting, installation of rock outcroppings, and land forming will be used to help minimize the visual impacts and create a safe wildlife crossing location.

The design of the new wildlife bridges will also provide an opportunity to create aesthetic continuity for travelers that enter California from Nevada. The primary aesthetic concept will be the wildlife corridor's theme, combined with subtle aesthetic design elements which relate to the Interstate 15 California State Entry monument markers. By unifying the design aesthetics of both transportation elements, a more cohesive visual aesthetic will be established which will be more pleasing for neighbors and users of this corridor.

The project overcrossing bridge structures will result in noticeable visual changes to the environment and change the visual character of the setting. Incorporation of these aesthetic treatment measures will, however, minimize, rectify, or otherwise offset these environmental visual impacts. Measures of bridge profile and design selection, adjustments of the adjacent grades, and design aesthetics will also help minimize visual impacts of the project. These measures are consistent with the PALM and are included in the Environmental Commitment Record.

The Project Development Team, or PDT, will collaborate with stakeholders and the public to guide aesthetic choices appropriate for the community and the environment. This close collaboration among stakeholder agencies will serve to help create a unified aesthetic theme and to support the community's aesthetic goals.



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Cultural Resources

A Historic Property Survey Report (HPSR) and Archaeological Survey Report (ASR) were prepared for this project by Caltrans Professionally Qualified Staff (PQS) in July 2023. As discussed in the HPSR and associated documents, Caltrans followed the standard industry practice cultural resources identification and impact analysis practices outlined in the Caltrans Standard Environmental Reference (SER) Volume II. This process involved establishing an Area of Potential Effects (APE) for the Project, conducting background research, performing cultural resources record search at the California Historical Resources Information System (CHRIS) Information Center, conducting a sacred lands file search through the Native American Heritage Commission (NAHC), consultation with associated Native American tribes and individuals, and conducting intensive pedestrian field surveys.

The APE consists of three separate wildlife crossing locations, with fencing. The Cady Mountain location project footprint will be approximately 5.8 acres, the Soda Mountain Location project footprint will be approximately 5.9 acres, and the Clark Mountain project footprint will be approximately 6.28 acres. An archaeological survey was conducted of the APE May 16, 2023; no archaeological resources were located during the survey. Native American Consultation was conducted with seven (7) Native American groups between March and July 2023. One Tribe, the Yuhaaviatam of San Manuel Nation, requested consultation on the project. The draft Cultural reports were provided to the Tribe in June 2023. A follow up email was sent to the Tribe on August 16. The THPO responded the same day stating they would review the documents and contact Caltrans if they had any comments. The Tribe has not provided any additional comments to date.

The studies for this undertaking were carried out in a manner consistent with Caltrans' regulatory responsibilities under Section 106 of the National Historic Preservation Act (36 CFR Part 800) and pursuant to the January 2014 First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation, and Public Resources Code 5024 and pursuant to the January 2015 Memorandum of Understanding Between the California Department of Transportation and the California State Historic Preservation Office.

Based on this review, Caltrans determined that there are no cultural resources present within the APE. Pursuant to Section 106 PA Stipulation IX.A, Caltrans has determined a Finding of No Historic Properties Affected is appropriate for this undertaking because there are no historic properties within the APE. Avoidance and minimization measures as



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

specified in the Environmental Commitment Record are required, to be included in the Resident Engineer's file.

Hydrology and Floodplain

A Summary Floodplain Encroachment Report and a Location Hydraulic Study were prepared by District Hydraulic Engineer Raftar Sharia in April, 2023. Project work will not add impervious surface or change the drainage pattern of the project area. There will be no longitudinal floodplain encroachment, significant floodplain encroachment, or any support of incompatible floodplain development. No hydrology or floodplain impacts are anticipated.

Water Quality and Stormwater Runoff

A Stormwater Data Report for this project was completed on March 22, 2023. The project is not located within a Total Maximum Daily Load (TMDL) watershed for which Caltrans has been named a stakeholder. The receiving waters within the Lahontan Regional Water Quality Control Board (RWQCB) jurisdiction will not be impacted by this project and are not on the 2010 303(d) list of Water Quality Limited Segments. The project will not discharge to drinking water reservoirs and/or groundwater recharge facilities. The Combined Risk Level (RL) for this project is 1.

The project has a Disturbed Surface Area (DSA) of 30.7 acres. The project will not add impervious surface or change the drainage pattern of the project area. The project is not anticipated to impact water quality or stormwater runoff. The project will be constructed using Construction General Permit (CGP), Order WQ 2022-0057-DWQ, NPDES No. CAS000002. The project requires a Storm Water Pollution Prevention Plan (SWPPP) as it will disturb more than 1 acre of soil. The SWPPP will include the development of a Construction Site Monitoring Program (CSMP).

Geology/Soils/Seismicity/Topography

The project has a wide variation in Hydrologic Soil Groups (HSG) depending on location. Cave Mountain (PM R116.70/R116.72) is within soil groups A/D and C, with a low runoff potential (Group A), a high runoff potential (Group D), and a moderately high runoff potential (Group C). Soda Mountain (PM R129.75/129.77) is within Soil Group C, with a moderately high runoff potential. Clark Mountain (PM 168.06/168.08) is within Soil Group B, with a moderately low runoff potential. The project must therefore provide temporary soil stabilization Best Management Practices (BMP's) appropriate for the Disturbed Soil Area (DSA), slope steepness, slope length, and soil erodibility of each project location.

Paleontology



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

A paleontological review of this project was performed by Bahram Karimi, Associate Environmental Planner/Paleontologist, on June 20, 2023. The review determined that the geology surface of the project area consists of sedimentary rocks, metasedimentary rocks, quartz monzonite and plutonic rock from diorite to granite. Grading, excavation, and other surface and subsurface excavation in the resource study area have the potential to impact significant nonrenewable fossiliferous formations. A Paleontological Mitigation Plan (PMP) is therefore required and shall be prepared during final project design and implemented during construction.

The PMP will include measures for preconstruction paleontological awareness training for earthmoving personnel, and paleontological monitoring during excavation activities to be conducted by a Principal Paleontologist. Upon completion of the project, a Paleontological Mitigation Report (PMR) must be completed. With the implementation of the measures specified in the PMP, adverse impacts to paleontological resources will be avoided.

Hazardous Waste/Materials

In coordination with District Environmental Engineering, an ISA Checklist was prepared for this project on May 2, 2023 and updated September 9, 2023. There is low risk of potential hazardous waste involvement. There are no storage structures or pipelines, no contamination, and no hazardous contaminants of concern at or near each of the three project sites. There is no naturally occurring asbestos (NOA), mines, faults, or other sources of contamination at or within one mile from each of the three project sites. A detailed site investigation (DSI) for the presence of aerially deposited lead (ADL) and Title 22 metals was conducted for each site during August-September 2023. These investigations disclose the potential presence of hazardous materials at the project site. With the implementation of measures included in these studies, impacts due to the presence of hazardous materials will be avoided. A lead compliance plan (LCP) and measures for treated wood waste are required. See Attached ECR for Hazard Waste measures.

Air Quality

An Air Quality Memo for this project was prepared and approved on May 03, 2023. The three project locations fall under the exempt project type listed under Table 2 of 40 CFR 93.126 or Table 1 of Caltrans CO Protocol "Planting and Landscaping, etc". The wildlife crossings project does require preparation of an air quality study because the project would not involve vehicular traffic but only animal species that inhabit the area. Furthermore, the project is exempt from conformity determination because it falls under the category of exempt projects listed in Table 1 and 2 per the EPA Transportation Conformity Rule. Therefore no Air Quality impacts are anticipated, and no Air Quality study is required.



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Noise

A noise review for this project was prepared and approved on May 3, 2023. This project falls under the Type III project category of 23CFR772.7 in the Traffic Noise Analysis Protocol dated April 2020. Per the Traffic Noise Analysis Protocol, "Type III projects do not require a noise analysis". Therefore the proposed project is considered an exempt project. No Noise impacts are anticipated and no Noise study is required.

Energy

The project does not propose to add electrical features, change the operations of, or add capacity to the existing facility. Construction equipment would use fuel and electricity during construction. Caltrans Best Management Practices (BMPs) will be implemented to minimize energy use and avoid waste. No study report on Energy usage or facilities is required.

Wildfire

The project is primarily located in a Local Responsibility Area and Federal Responsibility Area Non-Very Hazardous Fire Hazard Severity Zones. The project will not impede emergency access, require the installation of further infrastructure, or exacerbate the direct or indirect effects of wildfire on people or structures, including pollutant concentrations, flooding, or landslides. No impacts due to potential wildfire events, or study report on potential wildfire risks of the project are anticipated.

Climate Change

The project will not add capacity to or change the operations of the existing transportation system. No impacts to operational emissions are anticipated. The project will generate emissions due to construction. A Project Construction GHG Emissions Estimate was developed on September 8, 2023. Cal-CET air modeling software was used to estimate construction and Greenhouse gas (GHG) emissions. The GHG for construction emissions on-road/offsite operations has been estimated as 12.34 tons of Carbon Dioxide Equivalent (CO₂e) per day of construction activity. Total Estimated Construction Emissions from the completed project (310 days) is estimated as 3,084 tons of CO₂e.

Best management practices (BMPs) will be implemented to minimize the amount of greenhouse gases emitted during construction. The project would not affect the resilience of the transportation system to flooding, wildfires, or sea level rise. No climate change impacts are anticipated.

SECTION 4(f)

Section 4(f) regulation was considered as a part of the review for this project, and Caltrans made a determination that Section 4(f) does not apply because there are no potential



CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Section 4(f) properties in the project area. There are no NRHP Historic Sites, parks, wildlife refuges, or recreational areas in the project area. The closest such properties are the Mojave National Preserve, located south of the Clark Mountain crossing location outside Caltrans ROW, the Hollow Hills Wilderness, located north of Baker, and Clark Mountain. No Section 4(f) study or report is required.

Attachments:

Attachment 1: Project Maps

Attachment 2: CEQA Statutory Exemption for Restoration Projects (SERP) CDFW Concurrence

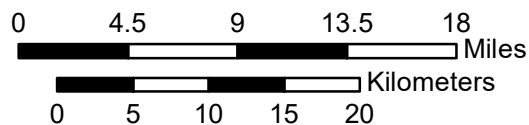
Attachment 3: CDFW SERP Concurrence Cover Letter

Attachment 4: Environmental Commitment Record

Attachments

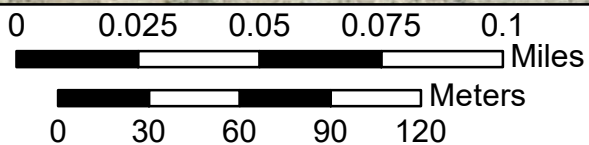
Attachment 1: Maps

1N590 Location and Vicinity



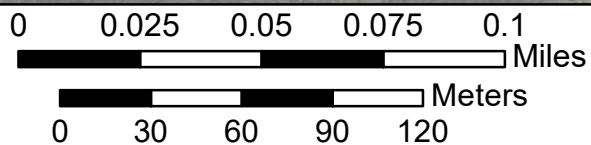
★ Wildlife Crossing Areas

1N590 APE Map



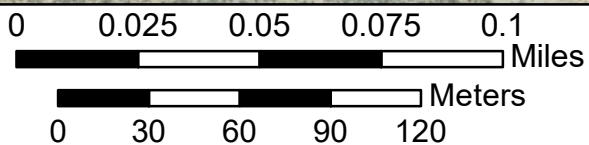
Cady Wildlife Crossing

1N590 APE Map

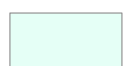


Soda Mountain Wildlife Crossing

1N590 APE Map



Clark Mountain Wildlife Crossing



BLM ROW

Attachment 2:
CEQA Statutory Exemption for Restoration Projects
(SERP) Concurrence

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
DIRECTOR'S OFFICE
POST OFFICE BOX 944209
SACRAMENTO, CA 94244-2090



**CALIFORNIA ENVIRONMENTAL QUALITY ACT STATUTORY EXEMPTION FOR
RESTORATION PROJECTS
CONCURRENCE NO. 21080.56-2023-036-R6**

Project: I-15 Mojave Wildlife Crossings Restoration Project
Location: San Bernardino County
Lead Agency: California Department of Transportation, District 8
Lead Agency Contact: Craig Wentworth; craig.wentworth@dot.ca.gov

Background

Project Location: The I-15 Mojave Wildlife Crossings Restoration Project (Project) is located at three locations along Interstate 15 (I-15) in San Bernardino County from Post Mile (PM) R114.0 to PM 171.5. The Project proposes to construct three vegetated wildlife overcrossings and wildlife directional fencing in the Mojave Desert near Cady Mountain (PM R116.70; 35.088, -116.322), Zzyzx Road (PM R129.75; 35.195, -116.142), and Clark Mountain (PM 168.05; 35.475, -115.572).

Project Description: California Department of Transportation (Caltrans) proposes to conserve, restore, protect, or enhance, and assist in the recovery of California native fish and wildlife, and the habitat upon which they depend and restore or provide habitat for California native fish and wildlife. The Project is designed to benefit desert bighorn sheep (*Ovis canadensis nelsoni*) populations in the Mojave Desert. Construction of I-15 has created a linear barrier that isolates desert bighorn sheep populations by bisecting suitable and historical habitats. The Project will construct a wildlife overcrossing with directional wildlife fencing on both sides of I-15 at each of the three locations (Cady Mountain, Zzyzx Road, and Clark Mountain). Locations for the three overcrossings have been determined in partnership with Oregon State University (OSU) and California Department of Fish and Wildlife (CDFW) at key sites where desert bighorn sheep are most likely to cross. The directional wildlife fencing will serve to guide desert bighorn sheep to the wildlife overcrossings and stop them from attempting to cross the highway where they could be struck by vehicles. The project will assist in restoring and enhancing wildlife connectivity for desert bighorn sheep and facilitate passage for other terrestrial species.

The need for the project is based on desert bighorn sheep genetic and tracking data demonstrating that I-15 is a movement barrier for sheep that have historically traveled between the northern mountain ranges and southern mountain ranges of the Mojave Desert. While there are several undercrossings (washes and large box culverts) present throughout the I-15 corridor in the Mojave Desert, desert bighorn sheep strongly prefer overcrossings

and are much less likely than other mammals to utilize undercrossings. From 2007 to 2020, at least 59 desert bighorn sheep were killed by vehicles in California, with one male killed near the Soda Mountains. I-15 divides the previously connected ranges into isolated habitat fragments, which decreases desert bighorn sheep genetic diversity, increases inbreeding, and increases territorial disputes amongst males. Furthermore, habitat fragmentation currently forces desert bighorn sheep to cross over I-15, increasing risk of vehicular crashes and desert bighorn sheep fatalities.

A multi-year research project lead by OSU, in collaboration with CDFW, used GPS tracking and wildlife cameras to evaluate the movements of 94 desert bighorn sheep from 2013 to 2020. One individual appears to have successfully crossed in 2016 (one ewe from Soda Mountains accompanied by a lamb) and a second individual (a ram from Cady Mountains) was suspected to have crossed in 2019. However, this event could have been due to a GPS error and is not verifiable. Despite the presence of desert bighorn sheep at all three overcrossing locations, seven years of monitoring by OSU indicates that successful I-15 crossings are rare.

The three overcrossings are proposed to be three-span, with openings for the existing Northbound and Southbound I-15 lanes and a proposed future rail line in the I-15 median. Each overcrossing will be approximately 100 feet wide, and the spans will accommodate space for one additional future travel lane in each direction on I-15. Although the travel lanes are being accommodated by overcrossing design, adding lanes to I-15 is not part of this Project. Railing and fencing will be installed at the edges of the overcrossings and chain link directional fencing will also be installed at various lengths along an access control line on each side of I-15 to guide wildlife to the appropriate overcrossing. The limits of the directional fencing were determined based on specific recommendations by OSU and CDFW biologists. The chain link directional fencing will also have permanent desert tortoise fencing to guide desert tortoise (*Gopherus agassizii*) to undercrossings or overcrossings instead of vehicle lanes. The overcrossings will be surfaced with native soil and rock and planted with native Mojave Desert plants, matching the characteristics of the surrounding desert habitats. The overcrossings will be off-limits to the public and all recreational uses will be prohibited. The Project size, including the three overcrossings and directional fencing, is approximately 20.5 acres and the overcrossings have an expected service life of approximately 75 years.

Tribal Engagement: Caltrans initiated Section 106 consultation with seven Native American Tribes or Tribal organizations on March 6, 2023. The Chemehuevi and Yuhaaviatam/San Manual have indicated a desire to be involved in the Section 106 consultation process for the Project. Caltrans followed up with the remaining five Tribes on April 6, 2023, and May 5, 2023, to determine their desire to consult. Caltrans will continue discussing the Project with Tribes on an ongoing basis and will continue the Section 106 consultation process with the Chemehuevi and Yuhaaviatam/San Manual Tribes.

Interested Party Coordination: Caltrans has worked closely with CDFW and OSU to determine the optimal locations for these wildlife overcrossings. Coordination has been ongoing since 2021 to access data, obtain expert recommendations on overcrossing locations, and determine how to construct the overcrossings to maximize wildlife use. Further coordination has taken place with the Bureau of Land Management (BLM), US Fish and Wildlife Service (USFWS), and local conservation groups including but not limited to The

Nature Conservancy, the Society for the Conservation of Bighorn Sheep, and the Mojave Desert Land Trust.

As part of the overall project development and environmental efforts, regular stakeholder outreach meetings and email communication have occurred since April 2023, with partners and interested parties. Participants include the National Parks Conservation Association, CA Chapter Wild Sheep Foundation, Defenders of Wildlife, Mountain Lion Foundation, Mojave National Preserve Conservancy, National Park Service, and BLM. Outreach meetings are expected to continue indefinitely. In addition, Caltrans is developing a project website to further engage and provide updates to agencies, the public, and other interested parties.

Further coordination with the U.S. Army Corps of Engineers, Lahontan Regional Water Quality Control Board, USFWS, and CDFW are ongoing for permitting, including Sections 404 and 401 of the Clean Water Act. Federal take of desert tortoise is authorized pursuant to a programmatic biological opinion. Several letters indicating the need for the Project have been submitted by nonprofits, public agencies, and elected officials.

Anticipated Project Implementation Timeframes:

Start date: May 2024

Completion date: April 2026

Lead Agency Request for CDFW Concurrence: On August 28, 2023, the Director of the California Department of Fish and Wildlife (CDFW Director) received a concurrence request from Caltrans (Lead Agency) pursuant to Public Resources Code section 21080.56, subdivision (e) (Request). The Request seeks the CDFW Director's concurrence with the Lead Agency's determination on August 28, 2023, that the Project meets certain qualifying criteria set forth in subdivisions (a) to (d), inclusive, of the same section of the Public Resources Code (Lead Agency Determination). The CDFW Director's concurrence is required for the Lead Agency to approve the Project relying on this section of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).

Concurrence Determination

The CDFW Director concurs with the Lead Agency Determination that the Project meets the qualifying criteria set forth in Public Resources Code section 21080.56, subdivisions (a) to (d), inclusive (Concurrence).

Specifically, the CDFW Director concurs with the Lead Agency that the Project meets all of the following conditions: (1) the Project is exclusively to conserve, restore, protect, or enhance, and assist in the recovery of California native fish and wildlife, and the habitat upon which they depend; or is exclusively to restore or provide habitat for California native fish and wildlife; (2) the Project may have public benefits incidental to the Project's fundamental purpose; (3) the Project will result in long-term net benefits to climate resiliency, biodiversity, and sensitive species recovery; and includes procedures and ongoing management for the protection of the environment; and (4) Project construction activities are solely related to habitat restoration. Pursuant to Public Resources Code section 21080.56, subdivision (g), CDFW will post this Concurrence on its CEQA Notices and Documents internet page: <https://wildlife.ca.gov/Notices/CEQA>.

This Concurrence is based on best available science and supported, as described below, by substantial evidence in CDFW's administrative record of proceedings for the Project.

This Concurrence is also based on a finding that the Project is consistent with and that its implementation will further CDFW's mandate as California's trustee agency for fish and wildlife, including the responsibility to hold and manage these resources in trust for all the people of California.

Discussion

- A. Pursuant to Public Resources Code section 21080.56, subdivision (a), the CDFW Director concurs with the Lead Agency that the Project will exclusively conserve, restore, protect, or enhance, and assist in the recovery of California native fish and wildlife, and the habitat upon which they depend; or restore or provide habitat for California native fish and wildlife.

By constructing three wildlife overcrossings with directional wildlife fencing, the Project will directly benefit desert bighorn sheep and other sensitive California native species currently impacted by climate change, habitat fragmentation, and vehicle collisions. At a similar overcrossing constructed in Arizona, bighorn sheep passage rates at the overcrossings increased by 210 percent within four years, and vehicle collisions were drastically reduced. By providing desert bighorn sheep with overcrossings at known movement corridors, vehicle strikes will be reduced, sheep will be able to freely travel across the landscape to access core habitats, and genetic diversity of desert bighorn sheep is expected to improve over time. Furthermore, the directional wildlife fencing will help to decrease the number of vehicle collisions with desert bighorn sheep and other terrestrial wildlife attempting to cross I-15, thus assisting in the long-term recovery and conservation of wildlife across a large portion of the Mojave Desert region. This Project is exclusively a restoration project, and no other Caltrans highway construction or maintenance work will be conducted as part of the Project.

- B. Pursuant to Public Resources Code section 21080.56, subdivision (b), the CDFW Director concurs with the Lead Agency that the Project may have incidental public benefits, such as public access and recreation.

From 2007 to 2020, at least 59 bighorn sheep were killed by vehicles in California, including a young ram that was found on I-15 in February 2020, near the Soda Mountains/Zzyzx Mountain location. Vehicle collisions with wildlife can impact public safety. By providing three wildlife overcrossings and directional wildlife fencing, desert bighorn sheep and other large mammals are not anticipated to cross the roadways at those locations in the future. This will provide incidental public benefits for the traveling public by reducing the risk of wildlife-vehicle collisions, personal injury, and monetary damage to property. The Project is designed to prevent unauthorized recreational use of the overcrossings. Project elements such as large boulders, bollards, or other features may be used to ensure that desert bighorn sheep can use the overcrossings while preventing unauthorized recreational use.

- C. Pursuant to Public Resources Code section 21080.56, subdivision (c), the CDFW Director concurs with the Lead Agency that the Project will result in long-term net benefits to climate resiliency, biodiversity, and sensitive species recovery, and includes procedures and ongoing management for the protection of the environment.

Long-term Net Benefits to Climate Resiliency: CDFW's *Restoring California's Wildlife Connectivity 2022* report lists desert bighorn sheep as a target species for top priority connectivity projects and identifies the Cave Mountain, Soda Mountain (Zzyzx Road), and Clark Mountain segment as a top priority for reestablishing connectivity. This Project will assist in conserving ecosystem resilience. By restoring the ability for desert bighorn sheep and other wildlife to cross I-15, the barrier effects of I-15 will be significantly diminished. With implementation of the Project, wildlife will be allowed to move freely to find food and mates, and to escape threats including climate change.

In the near term, the wildlife overcrossings will better aid in the natural movements of desert bighorn sheep. Based on OSU collar data, the three overcrossing locations have either had successful crossings or multiple approaches by radio collared desert bighorn sheep, showing that they will likely cross I-15 if provided adequate access. By reestablishing connectivity, desert bighorn sheep will have a greater accessible range that more closely aligns with their historical habitat and will be able to better defend against short term climate change impacts, such as flooding or extreme drought.

In the long term, as excessive heat, aridification, and drought conditions continue in California, desert bighorn sheep may experience contraction of their historical range because of climate change. Based on data from OSU and CDFW, successful I-15 crossings are infrequent and rarely successful. By creating these overcrossings, desert bighorn sheep will have greater access to core habitats, assisting their adaptation to greater frequency and intensity of future long-term adverse climatological changes.

Long-term Net Benefits to Biodiversity: The Project is designed to benefit biodiversity through the creation of wildlife overcrossings. By creating these wildlife overcrossings, desert bighorn sheep will be able to safely cross I-15, directly benefiting the species at the population level by promoting greater genetic diversity. Furthermore, these overcrossings can be used by other animals crossing I-15. By both providing overcrossings and maintaining or enhancing access to existing undercrossings such as culverts, animals will have greater opportunities to safely cross the interstate, potentially preventing genetic bottlenecks and increasing genetic diversity. The overcrossings themselves will also provide habitat for native plant species. Wildlife expected to use the overcrossings include but are not limited to Mojave fringe-toed lizard (*Uma scoparia*), desert tortoise, and monarch butterfly (*Danaus plexippus*). Birds in the area, such as Bendire's thrasher (*Toxostoma bendirei*), may use the vegetation on the overcrossings as foraging habitat as well.

Long-term Net Benefits to Sensitive Species Recovery: Desert bighorn sheep will be the primary sensitive species benefitting from the Project, with secondary benefits to mountain lion (*Puma concolor*) and other wildlife of conservation concern. The overcrossing locations have been chosen carefully to align with historical records of

desert bighorn sheep migration routes. Past construction and maintenance of I-15, along with increasing vehicle traffic, have significantly reduced opportunities for north-south wildlife movement in the Mojave Desert region. Research from OSU and CDFW have determined that while undercrossings facilitate some limited connectivity for certain species, desert bighorn sheep are unlikely to use them. Implementation of the Project, including the creation and long-term management of overcrossings within the I-15 corridor, is imperative for restoring desert bighorn sheep connectivity. Providing overcrossings will increase native species range and distributions, improve connectivity vital for sustaining ecosystems, and increase ecosystem distributions to areas previously difficult or impossible for desert bighorn sheep to reach. The overcrossing structures are expected to have a minimum anticipated service life of 75 years, providing a long-term benefit for sensitive species recovery.

Procedures for the Protection of the Environment: Avoidance and minimization measures will be implemented to ensure the protection of the environment during Project implementation. These measures will include, but are not limited to: pre-construction plant, nesting bird, and desert tortoise surveys; environmentally sensitive area fencing to protect sensitive plant species in the project impact areas; temporary desert tortoise fencing to exclude desert tortoises from Project impact areas; potential work restriction windows to avoid nesting bird season (between February 1 and August 31); a Worker Environmental Awareness Program to train workers on how to identify and protect sensitive species; and the purchase of mitigation bank credits for any protected species or habitats for which impacts are unavoidable, such as waters of the US. Caltrans will also follow standard Best Management Practice (BMP) measures (2022 or latest version) to ensure no impacts to species.

Caltrans conducted a full habitat suitability assessment for rare plants and desert tortoise on April 10, 2023, and will conduct further suitability assessments and surveys at the three Project locations before construction starts. A habitat suitability assessment and survey report will be prepared to discuss avoidance and minimization measures that will be implemented during project construction to protect identified special-status species and discuss design elements to enhance habitat in the near- and long-term future. Avoidance and minimization measures will include a Worker Environmental Awareness Program, biological monitor, temporary high visibility fencing, temporary desert tortoise fencing, invasive weed control, and other measures.

Ongoing Management for the Protection of the Environment: Caltrans will implement ongoing management of the overcrossings for the protection of the environment. native habitat established on the overcrossings will be monitored and maintained by Caltrans. As with all structures managed by Caltrans, the overcrossings themselves will be periodically inspected by bridge engineers for damage and appropriate preservation work will be conducted to extend their service life. Ongoing management will also include long-term effectiveness monitoring by Caltrans in partnership with CDFW. This work will include installing wildlife cameras and implementing a long-term monitoring plan. Cameras will be installed so that they are built into the overcrossings and are protected to decrease the risk of theft. These cameras will depict species utilizing the overcrossings and aid in determining the success of the restoration efforts

and troubleshooting future actions. Caltrans will also follow standard BMP measures (2022 or latest version) when performing its management activities.

- D. Pursuant to Public Resources Code section 21080.56, subdivision (d), the CDFW Director concurs with the Lead Agency that the Project does not include any construction activities, except those solely related to habitat restoration.

Project work is composed solely of installing, maintaining, and monitoring wildlife overcrossings and directional fencing. The overcrossings have independent utility and are not connected to any existing or future Caltrans project and will only serve to provide suitable wildlife overcrossings and habitat. There will be no other construction or maintenance activities connected to this project other than the long-term inspection and maintenance of the structures themselves in order to extend the life cycle of the overcrossings. All Project work will be directly related to the construction of either the wildlife overcrossings or the wildlife directional fencing.

Scope and Reservation of Concurrence

This Concurrence is based on the proposed Project as described by the Lead Agency Determination and the Request. If there are any subsequent changes to the Project that affect or otherwise change the Lead Agency Determination, the Lead Agency, or any other public agency that proposes to carry out or approve the Project, shall submit a new lead agency determination and request for concurrence from CDFW pursuant to Public Resources Code section 21080.56. If any other public agency proposes to carry out or approve the Project subsequent to the effective date of this Concurrence, this Concurrence shall remain in effect and no separate concurrence from CDFW shall be required so long as the other public agency is carrying out or approving the Project as described by the Lead Agency Determination and the Request.

Other Legal Obligations

The Project shall remain subject to all other applicable federal, state, and local laws and regulations, and this Concurrence shall not weaken or violate any applicable environmental or public health standards. (Pub. Resources Code, § 21080.56, subd. (f).)

CDFW Director's Certification

By: _____

Charlton H. Bonham, Director
California Department of Fish and Wildlife

Date: 10/13/2023

Attachment 3:
CDFW SERP Concurrence Cover Letter



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Director's Office
Post Office Box 944209
Sacramento, CA 94244-2090
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



October 12, 2023

Craig Wentworth
Supervising Environmental Planner/Biologist
California Department of Transportation, District 8
464 W 4th St, 6th Floor, MS 822
San Bernardino, CA 92401-1400
craig.wentworth@dot.ca.gov

**California Environmental Quality Act Statutory Exemption for Restoration Projects
– I-15 Mojave Wildlife Crossings Restoration Project (Request No. 21080.56-2023-036-R6)**

Dear Craig Wentworth:

I am pleased to inform you as the Director of the California Department of Fish and Wildlife (CDFW) that I concur with the lead agency determination by the California Department of Transportation, District 8 (Caltrans) that the I-15 Mojave Wildlife Crossings Restoration Project qualifies as a statutorily exempt restoration project under the California Environmental Quality Act (CEQA). (Pub. Resources Code, § 21080.56, subd. (e).) My concurrence as the CDFW Director is based on CDFW's independent review of the Caltrans request for concurrence, which CDFW received on August 28, 2023. In my opinion, informed by the best available science and described in the separate CDFW concurrence, the I-15 Mojave Wildlife Crossings Restoration Project meets all the qualifying criteria in Public Resources Code section 21080.56, subdivisions (a) to (d), inclusive.

This concurrence signifies the continued commitment by CDFW and its partners in advancing the "Cutting the Green Tape" initiative, which is a collaborative effort to increase the pace and scale of restoration projects in California in a way that protects the environment and results in long-term net benefits to climate resiliency, biodiversity, and sensitive species recovery. CDFW stands ready to continue this effort in coordination with Caltrans.

Craig Wentworth, Supervising Environmental Planner/Biologist
California Department of Transportation, District 8
October 12, 2023
Page 2

CDFW's concurrence will be posted on our website as provided by Public Resources Code section 21080.56. If you have any related questions, please contact Brad Henderson, Cutting the Green Tape Program Manager, at (530) 351-5948, or by email at Brad.Henderson@wildlife.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "CH Bonham", with a long horizontal flourish extending to the right.

Charlton H. Bonham
Director

cc: Valerie Termini
Chief Deputy Director
California Department of Fish and Wildlife

Steven Ingram
Assistant Chief Counsel
Office of the General Counsel
California Department of Fish and Wildlife

Josh Grover
Deputy Director
Ecosystem Conservation Division
California Department of Fish and Wildlife

Heidi Calvert
Regional Manager
Inland Deserts Region (Region 6)
California Department of Fish and Wildlife

Brad Henderson
Environmental Program Manager
Watershed Restoration Grants Branch
California Department of Fish and Wildlife

Attachment 4:
Environmental Commitment Record



Environmental Commitments Record (ECR)

DIST-CO-RTE: 08 - SBD - 015 **PM/PM:** R114.000/171.500 **EA/Project ID:** 08-1N590_ / 0823000021

Project Description: CONSTRUCT WILDLIFE CROSSINGS AND FENCING IN THE MOJAVE DESERT AT THREE LOCATIONS ALONG INTERSTATE 15 NEAR CAVE MOUNTAIN, SODA MOUNTAIN, AND CLARK MOUNTAIN.

Environmental Planner: Ronn Knox **Phone:** 909-261-5171

Construction Liaison: **Phone:**

Resident Engineer: **Phone:**

PERMITS

Permit	Agency	Application Submitted	Permit Received	Permit Expiration	Permit Requirements Completed by	Permit Requirements Completed on	Comments
1600	California Department of Fish & Wildlife						
Caltrans NPDES Permit	State Water Resources Control Board/Lahontan Regional Water Quality Control Board						
Statewide General Construction Permit	State Water Resources Control Board						
Programmatic BO	US Fish and Wildlife	7/31/23	9/14/23				
Water Discharge Requirement (WDR)	Regional Water Quality Control Board						

ENVIRONMENTAL COMMITMENTS

PA&ED

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
Paleontology	PALEO-1: Grading, excavation and other surface and subsurface excavation in the RSA have potential to impact significant nonrenewable paleontological resources. A paleontological mitigation plan (PMP) should be prepared by a qualified principal paleontologist during final design.	PER	n/a	District Paleontologist						
Paleontology	PALEO-1.1: A Paleontological Mitigation Plan (PMP) shall be prepared by a qualified principal paleontologist.	PER	n/a	District Paleontologist						
Paleontology	PALEO-1.2: A signed repository agreement with facility that approved by Caltrans to establish a curation process in the event of sample collection.	PER	n/a	District Paleontologist						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
PS&E/BEFORE RTL										
Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	BIO-General-9: Environmentally Sensitive Area (ESA): To address impacts to desert tortoise habitat, and to protect special-status plant and animal species, delineate the boundaries of areas to be disturbed using temporary high visibility fencing and desert tortoise temporary fencing prior to construction and after pre-construction surveys have been completed to confine all disturbances, project vehicles, and equipment to delineated project areas and staging and storage areas. Installation of desert tortoise temporary fencing must be supervised by the approved biological monitor.	NES	SSP	Caltrans Biologist, Project Engineer						
Biology	BIO-General-PSM-20: Bridge railing and directional wildlife fencing must comply and be approved through the California Department of Fish and Wildlife.	VIA, NES	NSSP	District Landscape Architect, Project Engineer, District Biology						
Biology	BIO-Reptile-PSM-2: Permanent Desert Tortoise Fencing: Permanent desert tortoise fencing must be included in the wildlife directional fencing to stop future attempted crossings of the desert tortoise. Installation of permanent desert tortoise fencing must be supervised by the approved biological monitor.	NES	SSP	Caltrans Biologist, Project Engineer, Resident Engineer, Contractor						
Landscape	VIS--1: Caltrans will ensure that aesthetic treatments for the three wildlife crossing bridges and retaining walls in the corridor shall be consistent throughout the project. This includes both elements at-grade and elevated alignments. These treatments must be consistent with the guidelines outlined in the Brightline West Project's "Project Aesthetic and Landscape Master Plan" also known as "PALM" and the proposed concept discussed in the Visual Impact Analysis.	VIA	n/a	District Landscape Architect, Project Engineer, Contractor						
Landscape	VIS-02: Caltrans shall ensure that all design elements including form, scale, material, texture, color, and details relate to and complement the surrounding environment.	VIA	n/a	District Landscape Architect						
Landscape	VIS-03: Caltrans shall ensure that concrete structures and engineering elements are colored and that their surfaces seamlessly blend with the neighboring landscaping, rock outcroppings and natural plantings. During finalizations of the design, Caltrans shall select a color scheme for the	VIA	n/a	District Landscape Architect, Project Engineer,						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
	bridge structure, DI aprons, drainage ditches, headwalls, end blocks, and galvanized surfaces like MGS, end treatments, bridge railing, and fencing that match the natural hues of the surrounding rock formations and or the rusted tones of the excavated slopes.			Contractor						
Landscape	VIS-04: Caltrans shall coordinate with CDFW to select the bridge profile and alignment to accommodate the bighorn sheep requirements. Measurements elsewhere in this document shall be taken to lessen the visual impact on the surrounding natural landscape.	VIA	n/a	District Landscape Architect						
Landscape	VIS-05: Caltrans will acknowledge all local organizations and entities that will be visually impacted by the wildlife bridge crossings and including these groups in shareholder meetings.	VIA	n/a	District Landscape Architect, Project Manager						
Landscape	VIS-06: During the final design selection process for the bridge type, Caltrans will collaborate with all stakeholders involved in the corridor. To ensure that the final bridge design reflects the natural landscape and incorporates appropriate scale, color, texture, and specific details. Stakeholder discussions will cover various design aspects, including structure type, rail design, substructures, retaining wall abutments, and revegetation plantings.	VIA	n/a	District Landscape Architect						
Landscape	VIS-07: Caltrans will create a task force focused on aesthetics and landscaping, known as the Aesthetics and Landscape Task Force Committee "ALTF". The ALTF will hold regular meetings for decision-making and record-keeping purposes.	VIA	n/a	District Landscape Architect						
Landscape	VIS-08: Caltrans will ensure close collaboration among stakeholder agencies to create a unified aesthetic theme and support the community's aesthetic goals.	VIA	n/a	District Landscape Architect						
Landscape	VIS-09: Design of maintenance elements, including worker safety features, paving, fencing, utility location, and access to Maintenance Vehicle Pullouts (MVPs) shall be located to seamlessly integrate into the project plan.	VIA	n/a	District Landscape Architect, Project Engineer, District Maintenance						
Landscape	VIS-10: The design layout plan must retain a maximum amount of existing vegetation and rock features by minimizing the amount of clearing and earthwork.	VIA	n/a	District Landscape Architect,						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
				Project Engineer, Contractor						
Landscape	VIS-11: The design must create a landscape plan and or an erosion control plan for disturbed areas that minimize the negative visual impact on the natural environment. The design shall include native vegetation, native boulders, gravel, rocks, plantings, and native soils for land forming around the crossings.	VIA	n/a	District Landscape Architect, Project Engineer, Contractor						
Landscape	VIS-12: The design must use gradual, smooth, flowing contour grading and slope rounding concepts to integrate bridges and highway improvements seamlessly into the surrounding environment and landscape.	VIA	n/a	District Landscape Architect, Project Engineer, Contractor						
Landscape	VIS-13: The design will use local soils and rocks to naturally adjust grades for the wildlife crossing approaches, so the project looks more natural.	VIA	n/a	District Landscape Architect, Project Engineer, Contractor						
Landscape	VIS-14: The restoration landscape plan will cover all disturb soil areas including staging areas, borrow pits and other areas of surface disturbances. The restoration landscape plan shall include a plant species list that emulates with species composition of adjacent vegetation with similar soil, slope, and aspect. The restoration landscape plan shall include a sensitive composition of vegetation (native trees, shrubs, and grasses) to reduce the visual contrasts of form, scale, color, texture, and line. Planting must take place in late autumn or early spring prior to the rainy season.	VIA	n/a	District Landscape Architect, Project Engineer, Contractor						
Landscape	VIS-15: Beginning with preliminary design and continuing through final design and construction, develop construction plans that apply aesthetic treatments to the three wildlife crossing bridges in the corridor that are consistent with the Brightline West Project's Project Aesthetic and Landscape Masterplan (PALM) and the proposed concept discussed in the Visual Impact Analysis	VIA	SSP	District Landscape Architect, Project Engineer, Contractor						
Landscape	VIS-16: All visible concrete structures and surfaces will be designed to visually blend with the adjacent landscaping, rock outcroppings, and natural plantings.	VIA	SSP	District Landscape Architect, Project						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
				Engineer, Contractor						
Landscape	VIS-17: Caltrans District Landscape Architect shall direct in all phases of design and construction how disturbed soil areas shall be landscaped and revegetated to the greatest extent feasible.	VIA	SSP	District Landscape Architect, Project Engineer, Contractor						
Other	GHG-5: Use water-efficient technologies for landscaping, building operations, etc. such as drought-tolerant landscaping, drip irrigation with moisture sensors, and water-saving fixtures such as low-flow toilets in structures.	SER	SSP	District Landscape Architect						
Other	GHG-6: Maximize use of solar cells for point-of-use energy source. Give consideration to compatibility with existing structures.	SER	SSP	District Landscape Architect, Project Engineer						
Other	GHG-7: Select project features that minimize the need for irrigation and nonnative plants.	SER	SSP	District Landscape Architect						
Other	GHG-8: Include project features that maximize planting of native tree species.	SER	SSP	District Landscape Architect						
Other	GHG-9: Incorporate native plants and vegetation to the project design. Replace more vegetation than was removed to increase carbon sequestration.	SER	SSP	District Landscape Architect						

PRE-CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
Air Quality	AQ-4: A fugitive Dust Control Plan will be developed for all projects where the NEPA analysis shows an impact on air quality from fugitive dust.	SER	SSP	Contractor						
Biology	BIO-Arthropod-1: Rare Insect Host Plant Preconstruction Clearance Survey, Flagging, and Fencing: No more than 3 days prior to project activities, a Caltrans Approved biologist must perform a preconstruction survey for rare insect host plants. Should any rare insect host plants be found, the Resident Engineer and Caltrans biologist must be contacted, and host plants must be flagged by the Caltrans Approved biologist for visual identification to construction personnel for work avoidance. Should multiple plants in a single location be found, the	NES	SSP	Resident Engineer, Caltrans Approved Biologist, Contractor						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
	groupings must be fenced with Environmentally Sensitive Area (ESA) temporary fencing.									
Biology	BIO-Avian-1: Preconstruction Nesting Bird Survey: If project activities cannot avoid the nesting bird season (typically January 15 through August 31 for raptors, and February 1 through September 30 for songbirds), then preconstruction nesting bird surveys must be conducted 3 days prior to construction by a Qualified Biologist to located and avoid nesting birds. These surveys must be properly timed protocol surveys in accordance with USFWS, CDFW, and BLM's most current (at time of activity) survey protocols. If any active nests are located, a no construction buffer may be established and monitored by the Qualified Biologist.	NES	SSP	Caltrans Approved Biologist						
Biology	BIO-Avian-2: Preconstruction Burrowing Owl Survey: Two burrowing owl preconstruction surveys must be performed: One survey 14 to 30 days prior to project activities, and one survey 24 hours prior to project activities, within the project footprint at all three bridge locations. These surveys must be properly timed protocol surveys in accordance with BLM's most current (at time of activity) survey protocols.		SSP	Contractor, Caltrans Approved Biologist						
Biology	BIO-DT-PSM 5: Geotechnical Testing: A designated biologist will accompany any geotechnical testing equipment to ensure no tortoises are killed and no burrows are crushed.		SSP	Caltrans Approved Biologist						
Biology	BIO-General-1: Equipment Staging, Storing, & Borrow Sites: All staging, storing, and borrow sites require the approval of the Caltrans biologist.	NES	SSP	Contractor, Resident Engineer, Caltrans Biologist						
Biology	BIO-General-10: ESA Fence Monitoring: Integrity inspections of temporary high visibility fencing and desert tortoise temporary fencing and enclosures (onsite cleared areas) must occur throughout the duration of the project 30 days prior to commencing project activities and after activities are completed. If during construction, the fence fails, work must stop until it is repaired, and the Caltrans approved biologist inspects (and clears) the job site.	NES	SSP	Resident Engineer, Caltrans Approved Biologist, Contractor						
Biology	BIO-General-4: Preconstruction Surveys: Preconstruction desert bighorn sheep, desert tortoise and special-status reptile surveys must be conducted by a Qualified Biologist 3 days prior to project activities within the BSA of all three bridge location and wildlife direction fencing locations. These surveys must be properly timed	NES	SSP	Contractor, Resident Engineer, Caltrans Approved Biologist						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
	protocol surveys in accordance with USFWS, CDFW, and BLM's most current (at time of activity) survey protocols. If a desert bighorn sheep, desert tortoise or special-status reptile species is located, the Resident Engineer and Caltrans biologist must be contacted and additional measures and/or agency coordination may be required.									
Biology	BIO-General-7: Worker Environmental Awareness Program (WEAP): A Qualified Biologist must present a Biological Resource information program/WEAP for desert tortoise, special-status plant species, special-status bird species, special-status mammal species, and protected natural communities prior to project activities to all personnel that will be present within the project limits for longer than 30 minutes at any given time. The WEAP program must include site-specific biological and non-biological resources, information on the legal protection for protected resources, penalties for violation of federal and State laws, administrative sanctions for failure to comply with requirements intended to protect site-specific biological resources, reporting requirements and measures to follow if protected resources are encountered (including potential work stoppage and requirements for notification of the designated biologist), and measures that personnel can take to promote the conservation of biological resources.	NES	SSP	Caltrans Approved Biologist						
Biology	BIO-General-PSM-20: Vegetation Mapping: A map delineating potential sites and habitat assessments of the following special vegetation features is required: yucca clones, creosote rings, Joshua tree woodland, and Crucifixion thorn stands.		SSP	Caltrans Approved Biologist						
Biology	BIO-Plant-1: Rare Plant Surveys, Flagging, and Fencing: Within 3 days prior to construction, a preconstruction survey must be conducted by a Qualified Biologist for special-status plant species, including BLM Sensitive and CNPS Rank 1 and 2 species, within the PIA for all three bridge locations. These surveys must be properly timed protocol surveys in accordance with USFWS, CDFW, and BLM's most current (at time of activity) survey protocols. Special-status plant species must be flagged for visual identification to construction personnel for work avoidance. Special-status plant species detected that feature multiple plants in a single location must be fenced with Environmentally Sensitive Area (ESA) fencing.	NES	SSP	Caltrans Approved Biologist, Contractor						
Biology	BIO-Plant-PSM-3: Top Soil Conservation: Prior to any groundbreaking activities, the top soil, or duff, of a project must be scrapped and stored to be redistributed on the	NES	SSP	Contractor						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
	project site after construction activities are completed.									
Hazardous Waste	HW-1: Use for material containing ADL at regulated concentrations as defined in the ADL Agreement with DTSC is present at the jobsite and will be excavated, transported, stockpiled, transported, placed within project limits, or disposed of in a landfill. SSP 14-11.08.	ISA	SSP	Resident Engineer, Contractor						
Hazardous Waste	HW-2: Liner for stockpiling Type R1 material. SSP 14-11.05B.	ISA	SSP	RE, Contractor						
Hazardous Waste	HW-3: For the use of local material, such as rock, gravel, earth, structure backfill, pervious backfill, imported borrow, and culvert bedding, obtained from a (1) noncommercial source, or (2) source not regulated under California jurisdiction, submit a local material plan for each material at least 60 days before placing the material. SSP 6-1.03.	ISA	SSP	Resident Engineer, Contractor						
Hazardous Waste	HW-4: If the project will generate treated wood waste from signposts or guardrail posts. Use Department-furnished expense: 066915 BOE Treated Wood Waste Generation Fee for projects that will generate more than 10,000 pounds of TWW in a calendar year. SSP 14-11.14.	ISA	SSP	Resident Engineer, Contractor						
Landscape	VIS-18: Contractor will collect duff and topsoil and store on site prior to clearing and grubbing. Duff and topsoil will be reused on site per the erosion control plan.	VIA	SSP	District Landscape Architect, Project Engineer, Contractor						
Stormwater	NPDES Requirements - Preparation and approval of the SWPPP and application to the State Water Resources Control Board.	Env Doc	n/a	District Stormwater	District Stormwater to: prepare and approve the SWPPP and apply to the State Water Resources Control Board.					

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
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CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
Air Quality	AQ-1: Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines and comply with the State Off-Road Regulation.	SER	SSP	Contractor						
Air Quality	AQ-2: Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy duty diesel engines and comply with the State Off-Road Regulation.	SER	SSP	Contractor						
Air Quality	AQ-3: Comply with Mojave Desert AQMD Fugitive Dust Control Rule, and Caltrans SSP 14-9.05.	SER	SSP	Contractor						
Air Quality	AQ-5: The contractor must comply with all local Air Quality Management District rules, ordinances, and regulations for air quality restrictions.	SER	SSP	Contractor						
Biology	BIO-Avian-PSM-4: Passive Burrow Exclusion and Burrowing Owl Translocation: If burrows cannot be avoided on-site, passive burrow exclusion by a designated biologist through the use of one-way doors will occur according to the specifications in Appendix D or the most up-to-date agency BLM or CDFW specifications. Before exclusion, there must be verification that burrows are empty as specified in the most up-to-date BLM or CDFW protocols. Confirmation that the burrow is not currently supporting nesting or fledgling activities is required prior to any burrow exclusions or excavations. Activity-specific active translocation of burrowing owls may be considered, in coordination with CDFW.		SSP	Caltrans Approved Biologist, Contractor						
Biology	BIO-DT-PSM 4: Access Road Culverts: All culverts for access roads or other barriers will be designed to allow unrestricted access by desert tortoises and will be large enough that desert tortoises are unlikely to use them as shelter sites (e.g., 36 inches in diameter or larger). Desert tortoise temporary fencing may be utilized to direct tortoise use of culverts and other passages. (Remove if no culverts are needed for access roads)		SSP	Contractor, Resident Engineer						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	BIO-DT-PSM 6: Vehicular Traffic Speed: Vehicular traffic will not exceed 15 miles per hour within the areas not cleared by protocol level surveys where desert tortoise may be impacted.		SSP	Contractor						
Biology	BIO-DT-PSM-3: Common Raven Management: Common raven management actions will be implemented for all activities to address food and water subsidies and roosting and nesting sites specific to the Common Ravens.		SSP	Contractor, Caltrans Biologist, Caltrans Approved Biologist						
Biology	BIO-General-12: Animal Entrapment: To prevent the inadvertent entrapment of desert tortoise during project activities, all excavated steep-walled holes or trenches more than 10 inches deep must be covered at the close of each work day by plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks. At the beginning of each working day, all such holes or trenches must be inspected to ensure no animals have been trapped during the previous night. Before such holes or trenches are filled, they must be thoroughly inspected for trapped animals. Trapped animals must be released by the Caltans Approved biologist.	NES	SSP	Contractor, Caltrans Approved Biologist						
Biology	BIO-General-13: Animal Sheltering: To prevent inadvertent harm of desert tortoise during project activities, all construction materials including but not limited to culverts and sections of pipe, must be inspected for the presence of wildlife sheltering in them prior to use or movement of those materials. Sheltering animals must be released by the Caltrans Approved biologist.	NES	SSP	Contractor, Caltrans Approved Biologist						
Biology	BIO-General-14: Predator Prevention: Project personnel are prohibited from feeding wildlife or bringing pets on the job site.	NES	SSP	Contractor						
Biology	BIO-General-16: Invasive Weed Control: To address impacts to natural communities, a Caltrans Approved biologist must identify invasive species within the project impact area during bridge construction activities. Treatment and disposal methods must be approved by the Caltrans biologist prior to vegetation removal.	NES	SSP	Caltrans Approved Biologist, Contractor						
Biology	BIO-General-2: Temporary Artificial Lighting restrictions: Artificial lighting must be directed at the job site to minimize light spillover onto the desert wash and bridge structure if project activities occur at night. Project must use lighting that does not attract birds and bats, or their prey, to project sites, including using non-steady burning lights (red, dual	NES	SSP	Contractor						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
	red, and whit strobe, strobe-like flashing lights). Lights shall use appropriate shielding to reduce horizontal or skyward illumination. Project must avoid the use of high-intensity lights (sodium vapor, quartz, halogen, and others).									
Biology	BIO-General-6: Species Avoidance: If during project activities a special-status plant species, bighorn sheep, desert tortoise, nesting bird, or burrowing owl is discovered within the project site, all construction activities must stop within 10 ft for plants, 125 ft for bighorn sheep, 100 feet for song-birds, 300 feet for passerine birds, 500 feet for raptors, 50 feet for desert tortoises, and 626 feet for burrowing owls, and the Caltrans Biologist and Resident Engineer must be notified. Coordination with BLM, CDFW and USFWS may be required prior to restarting activities.	NES	SSP	Contractor, Caltrans Approved Biologist, Resident Engineer						
Biology	BIO-General-8: Biological Monitor: The Caltrans approved biologist must monitor project activities weekly to ensure that measures are being implemented and documented. The biological monitor must supervise the installation of any temporary and/or permanent desert tortoise fencing.	NES	SSP	Caltrans Approved Biologist						
Biology	BIO-General-9: Environmentally Sensitive Area: To address impacts to Joshua tree woodland and desert tortoise habitat, delineate this area as an ESA as shown on the plans and/or described in the specifications	NES	SSP	Contractor, Caltrans Biologist,						
Biology	BIO-General-PSM-17: Agency Notification and Reporting Requirements: Any listed species within or near the job site, or as specified in BIO-General-6, found alive, injured, or dead during the implementation of the Project must be immediately reported to the Resident Engineer and Caltrans Biologist. Caltrans Biology must then notify the Resource Agencies. Veterinary treatment and/or final deposition must follow Resource Agencies' approval. Monitoring reports must include WEAP Training and submitted to the Resource Agencies on a timeframe to be determined.	NES	SSP	Contractor, Caltrans Biologist, Resident Engineer						
Biology	BIO-General-PSM-18: Non-native species introduction: Workers will take actions not to introduce, dispose of, or release any non-native species into areas of native habitat, suitable habitat, and natural or artificial waterways/water bodies containing native species.		SSP	Contractor, Caltrans Approved Biologist						
Biology	BIO-General-PSM-19: Harassment and Collection of Special-Status Species: Project personnel are forbidden from feeding wildlife, leaving food or trash in the project area, collecting native plants, or harassing wildlife.		SSP	Contractor, Caltrans Approved Biologist						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	BIO-Natural Community-PSM 2: Crucifixion thorn stands with greater than 100 individuals will be avoided to the maximum extent practicable.		SSP	Contractor, Resident Engineer, Caltrans Approved Biologist						
Biology	BIO-Natural Community-PSM-1: Joshua Tree Woodland: Impacts to Joshua tree woodlands will be avoided to the maximum extent practicable.		SSP	Contractor, Resident Engineer, Caltrans Approved Biologist						
Biology	BIO-Plant-PSM 4: Cactus, Yucca, and Succulent Management: Management of cactus, yucca, and other succulents will adhere to current up-to-date BLM policy. BLM may consider disposal of succulents through public sale, as per current up-to-date State and national policy.		SSP	Caltrans Approved Biologist						
Biology	BIO-Plant-PSM 5: Plant Material Collections: Allow for the collection of plant material consistent with the maintenance of natural ecosystem processes.		SSP	Caltrans Approved Biologist, Contractor						
Biology	BIO-Plant-PSM 6: Dead and Downed Wood: Promote appropriate levels of dead and downed wood on the ground to provide wildlife habitat, seed beds for vegetation establishment, and reduce soil erosion, as determined appropriate on an activity-specific basis.		SSP	Caltrans approved biologist, Contractor						
Biology	BIO-Plant-PSM-3: Cactus, Nolina, and Yucca Relocation: The Qualified Biologist must salvage and relocate cactus, nolina, and yucca from all three project locations prior to disturbance and replant back to original site. If replanting in the original site is not an option, the Qualified Biologist must coordinate with the Caltrans Biologist and RE to determine a suitable relocation site. All activities will follow applicable BLM state and national regulations and policies for salvage and transplant of cactus, yucca, other succulents, and BLM Sensitive plants.		SSP	Caltrans Approved Biologist, Contractor						
Biology	BIO-Reptile-1: Equipment Flagging: After each shift, order project personnel to attach surveyor flagging tape to a conspicuous place on each piece of equipment to remind the operator to check under the equipment for desert tortoise before operating equipment during the next shift.	NES	SSP	Contractor						
Biology	BIO-Reptile-5: Trash/Predation: Caltrans must implement measures to reduce the attractiveness of job sites to common raven and other subsidized predators by		SSP	Contractor, Caltrans Biologist,						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
	controlling trash and educating workers. All work areas will be kept free of trash and debris.			Resident Engineer						
Biology	BIO-Reptile-PSM-2: Permanent Desert Tortoise Fencing: Permanent desert tortoise fencing must be included in the wildlife directional fencing to stop future attempted crossings of the desert tortoise.	NES	SSP	Contractor; Design						
Cultural Resources	CR-1: If buried cultural resources are encountered during project activities, it is Caltrans policy that work stop within 60 feet of the area until a qualified archaeologist can evaluate the nature and significance of the find.	Std. Spec	Std. Spec	District Cultural Studies, Project Engineer, Resident Engineer, Contractor						
Cultural Resources	CR-2: In the event that human remains are found, the county coroner shall be notified and ALL construction activities within 60 feet of the discovery shall stop. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). The person who discovered the remains will contact the District 8 Division of Environmental Planning; Andrew Walters, DEBC: (909)260-5178 and Gary Jones, DNAC: (909)261-8157. Further provisions of PRC 5097.98 are to be followed as applicable.	Std. Spec	Std. Spec	District Cultural Studies, Project Engineer, Resident Engineer, Contractor						
Landscape	VIS-19: Contractor shall treat excavated cut slopes with an environmentally safe oxidizing agent to mimic an "aged" rock surface. Any rocks removed during construction shall be reused in disturbed areas, per a safe appropriate design that doesn't compromise public safety.	VIA	SSP	District Landscape Architect, Project Engineer, Contractor						
Paleontology	PALEO-2: A Paleontological Mitigation Plan (PMP) shall be prepared by a qualified principal paleontologist. All elements of PMP Format published in the Caltrans Standard Environmental Reference (Caltrans 2003) will be included.	SER	n/a	RE, Contractor						
Paleontology	PALEO-2.1: Required 1-hour preconstruction paleontological awareness training for earthmoving personnel, including documentation of training such as sign in sheets, and hardhat stickers, to establish communications protocols between construction personnel and the principal paleontologist.	PER	n/a	District Paleontologist, Resident Engineer						
Paleontology	PALEO-2.2: A signed repository agreement with a facility that approved by Caltrans to establish a curation process in	PER	n/a	District Paleontologist,						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
	the event of sample collection.			Contractor-Supplied Paleontologist, RE						
Paleontology	PALEO-2.3: Field and laboratory methods that meet the curation requirements will be implemented for monitoring, reporting, collection, and curation of collected specimens. Curation requirements are available for public review.	PER	n/a	District Paleontologist						
Paleontology	PALEO-2.4: Monitoring, by a principal paleontologist of sedimentary rock formation during excavation.	PER	n/a	District Paleontologist, Resident Engineer						
Stormwater	An approved Storm Water Pollution Prevention Plan shall be implemented during construction, that includes site map(s), and identification of construction/contractor activities that could cause pollutants in stormwater, and a description of measures or practices to control these pollutants.	Env Doc	n/a	District Stormwater	District Stormwater will address the implementation of the SWPPP during construction.					
Other	GHG-10: Use corrosion-resistant materials	SER	SSP	District Landscape Architect, Project Engineer						
Other	GHG-11: Stabilize slopes to lower chances of landslide on slopes at-risk from more frequent or intense wildfire and precipitation	SER	SSP	District Landscape Architect, Project Engineer						
Other	GHG-2: For improved fuel efficiency from construction equipment: • Maintain equipment in proper tune and working condition • Use right sized equipment for the job • Use equipment with new technologies	SER	SSP	RE, Contractor						
Other	GHG-3: Supplement existing construction environmental training with information on methods to reduce GHG emissions related to construction.	SER	SSP	RE, Contractor						
Other	GHG-4: Use accelerated bridge construction (ABC) method. (Reduces construction windows, uses more precast elements that in turn reduce need for additional falsework, forms, bracing, etc.).	SER	SSP	RE, Contractor						

Environmental Commitments Record for I-15 MOJAVE WILDLIFE CROSSINGS

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
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POST-CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E Package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA
Biology	BIO-Arthropod-PSM-2: Plant Seed Mix: Seed mixes must contain a diversity of native pollinator plant species.	NES	SSP	Landscape, Contractor						
Biology	BIO-General-11: ESA Fence Removal: All fencing must be removed as a last order of work. During removal, a Caltrans approved biologist must be present.	NES	SSP	Contractor, Caltrans Approved Biologist, Resident Engineer						
Paleontology	PALEO-3: A Paleontological Mitigation Report (PMR) discussing finding and analysis will be prepared by principal paleontologist upon completion of project earthmoving. The report will be included in the environmental project file and also submitted to the curation facility.	PER	n/a	District Paleontologist						
Stormwater	At completion of all work, if treatment BMPs are constructed as part of this project, completion of treatment BMPs must be documented in the Environmental Commitments Record for this project.	Env Doc	n/a	District Stormwater	Completion of treatment BMPs must be documented in the Environmental Commitments Record and confirmed by District Stormwater.					
Stormwater	The certification of the final soil stabilization of all disturbed soil areas must be confirmed by District Stormwater.	Env Doc	n/a	District Stormwater	The certification of the final soil stabilization of all disturbed soil areas must be confirmed by District Stormwater.					

Attachment K

LONG FORM STORM WATER DATA REPORT



Dist-County-Route: - 08-SBd-15

Post Mile Limits: 114.0/171.5

Type of Work: Mojave Wildlife Crossing Restoration project

Project ID (EA): 0823000021 (1N5900)

Phase: ☐ PID ☒ PA/ED ☐ PS&E

Applicable Caltrans Post Construction Treatment Requirement: 2012 ☐ 2022 ☒

Regional Water Quality Control Board(s): Lahontan (Region 6)

Total Disturbed Soil Area: 43.4 acres PCTA: 0

Alternative Compliance (acres): ATA 2 (50% Rule)? Yes ☐ No ☒

Estimated Const. Start Date: 07/01/24 Estimated Const. Completion Date: 03/17/26

Risk Level: RL 1 ☒ RL 2 ☐ RL 3 ☐ WPCP ☐ Other: _____

Is (M)WELQ applicable? Yes ☐ No ☒

Is the Project within a TMDL watershed? Yes ☐ No ☒

Does the project require trash treatment? Yes ☐ No ☒

Notification of ADL reuse (if yes, provide date): Yes ☐ Date: _____ No ☒

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E only.

Behzad Sedighi 11/15/2023
Behzad Sedighi, Registered Project Engineer Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

for Martha Santana 11/22/23
Nader Naguib, Project Manager Date

William DeCoursey 11/22/23
William DeCoursey, Acting Maintenance Representative Date

Almabeth Anderson 11/27/2023
Almabeth Anderson, Landscape Architect
Representative Date

[Stamp Required at PS&E only] Gregory Clark 12-05-2023
Greg Clark, District SW Coordinator Date

AN
11/28/2023

Attachment L

TRANSPORTATION MANAGEMENT PLAN (TMP) DATA SHEET

TMP Elements	EA #/ID#	1N590/0823000021	Date	11/9/2023
Note: A checkmark in the box means you need to include this in the project unless staging, material, or work hour changes eliminate the need for the item. A ? in front means TMP anticipates this - please check into this. A blank box means the item is not needed at this time based on the information received.				

Public Affairs officer's 1st. & last name	Phone number
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1	Public Information/Public Awareness Campaign (PAC). Developer: Remember to obtain the estimate from Public affairs by contacting Emily Leinen. Procedure is in the file under 3- TMP matters	Estimated Cost

BEES 066063 (Traffic Management Plan-Public Information). Cost to be reduced by Public Affairs (PA) and Construction Liaison (CL) only. Show under **State Furnished** as the **total** of PA+CL.

\$ 10,000

- 1.1 ☐ Include Rideshare information in PA/CL project material to encourage vehicles reduction in work area
 - 1.2 ☒ Brochures and Mailers
 - 1.3 ☒ Media Releases (& minority media sources)
 - 1.4 ☐ Paid Advertising
 - 1.5 ☐ Public Meetings/PAC Mtgs./Speakers Bureau (show cost also for room rental)
 - 1.6 ☐ Hand deliver notices to vicinity
 - 1.7 ☐ Broadcast fax service
 - 1.8 ☐ Telephone Hotline OR
 - 1.9 ☐ 1-800-COMMUTE (The telephone number is shown on CS-Info signs) -
 - 1.10 ☐ Visual Information (videos, slide shows, etc.)
 - 1.11 ☐ Local cable TV and News
 - 1.12 ☒ Traveler Information System (Internet)
 - 1.13 ☒ Internet, E-mail, Social Media
 - 1.14 ☒ Notification to targeted groups:
 - ☐ Revised Transit Schedules/maps
 - ☐ Rideshare organizations
 - ☐ schools
 - ☐ organizations representing people with disabilities
 - ☐ bicycle organizations
 - 1.15 ☐ Include PA/CL/Consultant resources in WPS
 - 1.16 ☐ Commercial traffic reporters/feeds - e.g. brief Traffic Information people (TIP) group
 - 1.17 ☐ Insert SSP's
- "A representative of the Contractor, at Superintendent level or higher, and authorized to commit the Contractor, shall attend and participate in all Public Awareness Campaign meetings. Time commitment for the meeting(s) varies from two to four hours per month."

Section 1 Total	\$ 10,000
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2 Motorist Information Strategies

Project team needs to coordinate with Traffic Design!

- 2.1 ☒ Existing Overhead Changeable Message Signs (Stationary)
 - ☐ New Installation (Stationary) - **BEES 860532** CHANGEABLE MESSAGE SIGN SYSTEM - list locations
- 2.2 ☒ Lane Closure System Website
- 2.3 ☒ Caltrans Highway Information Network (CHIN)
- 2.4 ☐ Portable Radar Speed Feedback Sign System Day **BEES 120204** (approx. EA @ \$50,000)
- 2.5 ☐ Bicycle and pedestrian information, e.g. Detour maps
- 2.6 ☐ Automated Workzone Information System (AWIS) **BEES 120105**

Section 2 Total	\$ -
------------------------	------

3 Incident Management

- 3.1 ☐ CHP's Construction or Maintenance Zone Enhanced Enforcement Program - COZEPP or MAZEPP. **BEES 066062** - show under "State or Agency furnished" in the Cost Estimate.

TMP Elements	EA #/ID#	1N590/0823000021	Date	11/9/2023
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Make sure to consider the LC hours and add CHP driving time to/from their office

Day COZEEP: To protect active closures

# of days	hours/day	CHP vehicles	# of officers.	Rate/Hr.
0	0	1	1	\$ 190

\$ -

Night COZEEP: To protect active closures

# of nights	hours/night	CHP vehicles	# of officers. Nights need 2 per car	Rate/Hr.
150	10	1	2	\$ 190

\$ 570,000

3.2 ☐ Tow Truck Service for Construction

\$/hr./truck

\$70

BEES 120100 - Traffic Control System

A For service within the regular Tow Truck hours	# of trucks	# of days	Hours per day

\$0

B For service outside the regular Tow Truck hours	# of trucks	# of days	Hours per day

\$0

Section 3 Total \$ 570,000

4 Construction Strategies

Contact DTM, at 909-383-6262, to get Delay Calculations, Lane Requirement Charts (LRC), Table Z and Special events list. Inform DTM of any concerns/commitments regarding special LC days, times, seasons, events; environmental restrictions; if work may be affected by snow and low or high temperatures. E.g. excessive heat may delay HMA operations lane openings which may increase traffic impact when vehicles overheat in the queue; etc. If traffic volumes vary significantly between seasons, consider 2 sets of LRCs to avoid CCOs.

4.1 This TMP presumes that work is planned as below. If different, TMP needs to be revised. The Project Engineer shall ensure all appropriate lane requirement charts are included.

- ☐ Day
- ☒ Night
- ☒ Weekend

4.2 Expected facility closures and requirements

- ☐ Flagging
- ☒ Shoulder
- ☒ Lane
- ☐ Local Street
- ☒ Ramp
- ☐ Connector*
- ☐ Extended Weekend Closures*
- ☐ Total Facility Closures*

*Consult with TMP developer and the DTM regarding COZEEP & other costs. Provide proposed detour and traffic diversion plans for review.

CAUTION: If the Lane Requirement Chart (LRC) for full mainline closures, of one or both directions on a highway or freeway, does not show the maximum number of allowable closures, the PS&E shall not be certified by DTM/TMP.

4.3 ☐ BEES 066008 Incentives

4.4 ☒ Strictly enforce construction CPM schedule

4.5 ☒ 10-Min. Delay Penalty Contact DTM at 909-838-6262 for 10 Min. Delay Penalty Calculations.

Section 4 Total \$ -

5 Demand Management (DM)

Project team needs to coordinate with RCTC/SBCTA

5.1 ☐ A co-op will be executed - mentioned in PSR or PR.
☐ Instead of a co-op, 15% is added to the cost of DM elements since the payment to the local agency will be routed through the contractor.

Instead of a co-op, the local agency will make their own arrangements with RCTC/SBCTA.

PA/CL or local agency need to inform commuters through RCTC/SBCTA. Funds part of PA/CL.

5.2 ☐ HOV Lanes/Ramps (New or Convert)

TMP Elements	EA #/ID#	1N590/0823000021	Date	11/9/2023
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- 5.3 ☐ Park-and-Ride Lots
- 5.4 ☐ Parking Management/Pricing (Coordination with local agency is required)
- 5.5 ☐ BEES 066067 Rideshare Promotion

Section 5 Total	\$ -
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6 Alternate Route Strategies

Caution - signed detours may require environmental clearance. Traffic diversion may increase available work hours. Please work with Traffic Design.

- 6.1 ☐ Add Capacity to Freeway connector
- 6.2 ☐ Ramp Closures
- 6.3 ☐ Temporary Highway Lanes or Shoulder Use
- 6.4 ☐ Parking Restrictions
- 6.5 ☐ Street Improvements
- ☐ State R/W - Signals, Widen, etc.
- ☐ Local R/W - Signals, Widen, etc. co-op or permit may be needed
- 6.6 ☐ Local Street USE - co-op or Permit may be needed
- 6.7 ☐ Traffic Control Officers (see 3.1 COZEED)
- 6.8 ☐ Signed detour - using State routes
- 6.9 ☐ Signed detour - using local streets and roads. Coordinate with corresponding local agency.
- 6.10 ☐ Adjust signals
- 6.11 ☐ Temporary bicycle or pedestrian facilities

Section 6 Total	\$ -
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TMP Estimate					
Developed by	John H. Lee	EA#/ID#	1N590/0823000021	Date	11/9/2023
TMP developer: Amounts under the cost column will automatically be copied from the TMP elements					
TMP Elements				Cost	
1. Public Information				\$10,000	
2. Motorist Information Strategies				\$0	
3. Incident Management				\$570,000	
4. Construction Strategies				\$0	
5. Demand Management (DM)				\$0	
6. Alternate Route Strategies				\$0	
Total TMP Estimate				\$ 580,000	

Attachment M

INITIAL SITE ASSESSMENT (ISA) CHECKLIST

INITIAL SITE ASSESSMENT (ISA) CHECKLIST - Update

DATE: **09/28/2023**

PROJECT INFORMATION:

District **08** County **SBD** Route **015** Postmile **R 114.00/R171.50** EA **1N590** PN **0823000021**

Description of Work:

The project scope consists of constructing vegetated wildlife crossings and fencing in the Mojave Desert at three locations along Interstate 15 (I-15) near Cady Mountain (PM R116.70 to PM 116.72), Soda Mountain (PM R129.75 to PM R129.77), and Clark Mountain (PM 168.06 to PM 168.08). Additional Right of Way might be required. Please provide the Preliminary Environmental Analysis Report (PEAR) by April 14, 2023.

Project Engineer **Henry Lam**

Telephone: **(909) 963-9574**

Environmental Coordinator **Tracey D'Aoust**

Telephone: **(909) 383-5929**

DATE ISA NEEDED **4/14/2023**

Attach the project location map and an aerial photo to this checklist to show the location of proposed R/W and all known and/or potential hazardous waste sites.

- Project Features: New R/W? **YES** Excavation? **YES** Railroad Involvement? **NO**
Structure Demolition/Modification? **NO** Utility Relocation? **TBD**
- Project Setting: Rural - **YES** Urban - **NO**
Current Land Uses: **Existing State Highway**
Adjacent Land Uses: **Vacant Land**
(Industrial light industry, commercial, agriculture, residential, other)
- Check Federal, State, and local environmental and health regulatory agency records as necessary to see if any known hazardous waste site is in or near the project area. If a known site is identified, show its location on the attached map and attach additional sheets as needed to provide all information available pertinent to the proposed project. IS PROJECT AFFECTING SITES LISTED ON CORTESE LIST? IF YES, DESCRIBE SITE: _____
- Conduct Field Inspection **GeoTracker, EnviroStor & Mineral hazards Info Maps** Date **04/14/2023**

Storage Structures/Pipelines:

USTs	NO		
Surface tanks	NO		
Sumps	NO	Ponds	NO
Drums	NO	Basins	NO
Transformers	NO		
Landfill	NO		
Other	N/A		

Contamination: (spills, leaks, illegal dumping, etc.)

Surface Staining	NO
Oil Sheen	NO
Odors	NO
Vegetation damage	NO
Other	N/A

Hazardous Materials: (asbestos, lead, etc.)

Buildings	NO
Sprayed-on	NO
Fireproofing	
Pipe Wrap	NO
Friable Tile	NO
Acoustical	NO
Plaster	
Serpentine	NO
Paint	NO
Other	

Other comments and/or observations:

The review of EnviroStor and GeoTracker, hazardous material maps showed no hazardous contaminants of concern at or within one mile from each of the three project sites. Environmental GIS Library maps showed no naturally occurring asbestos (NOA), mines, faults, or other sources of contamination at or within one mile from each of the three project sites.

Per the site investigation conducted for the project on September 2023, include the following SSPs in the PS&E package:

SSP 6-1.03: conditions for use of local material from non-commercial source.

SSP 14-11.08: Management of regulated material containing ADL, requires a lead compliance plan (LCP) and item 070030 for LCP.

SSP 14-11.05B: Liner for stockpiling Type R1 material.

SSP 14-11.14: For management of Treated Wood Waste if the project will remove any.

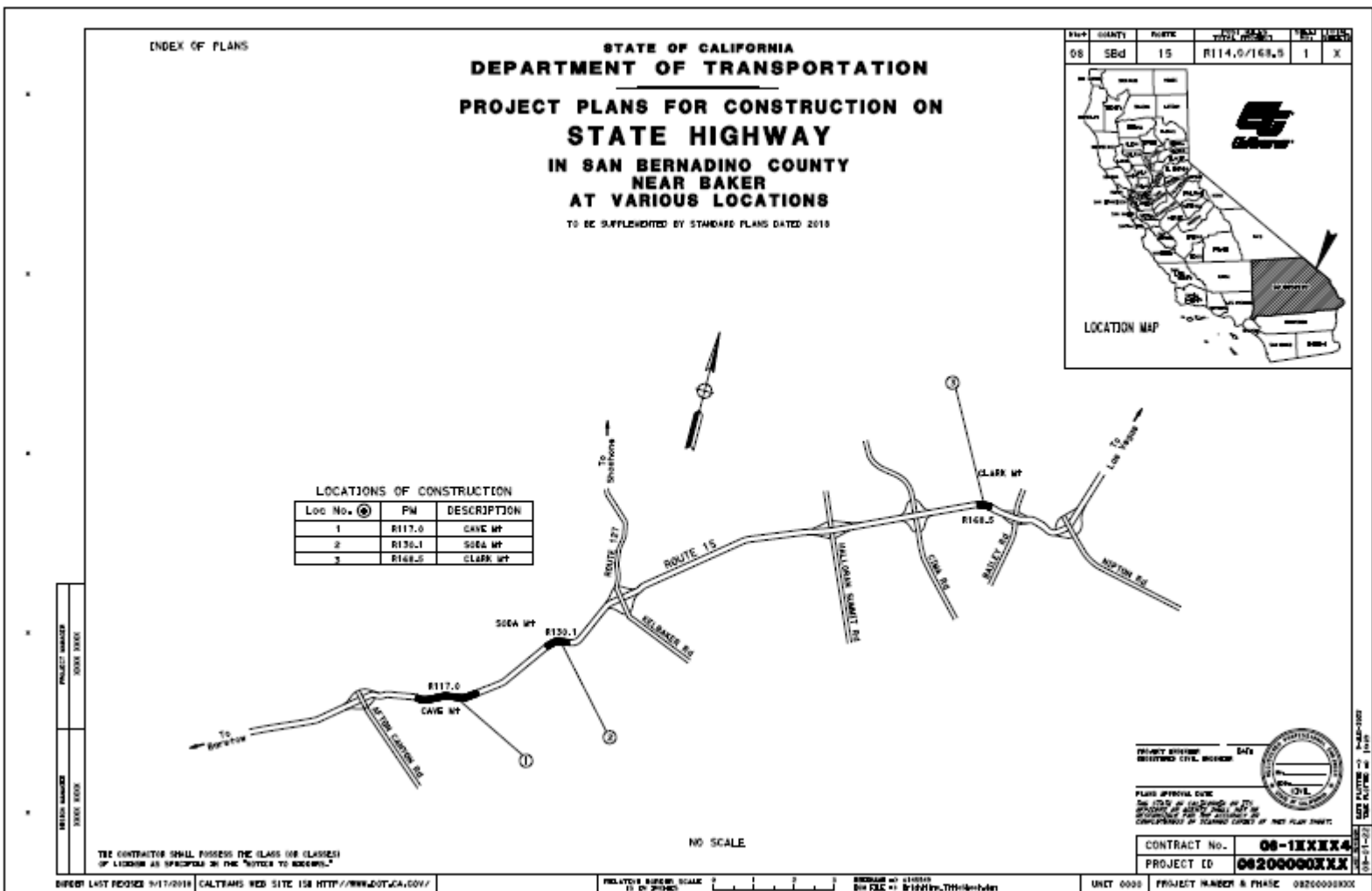
ISA DETERMINATION:

Does the project have potential hazardous waste involvement? **LOW RISK**

If there is known or potential hazardous waste involvement, is additional ISA work needed before task orders can be prepared for the Preliminary Site Investigation? **NO** If yes, explain, and give estimate of additional time required:

ISA CONDUCTED BY: **Neil Azzu** DATE: **09/28/2023**

Neil Azzu - ENV. ENG. MS-824
DISTRICT 08 HAZARDOUS WASTE (909) 697-9470



Attachment N

AGREEMENT TO IMPLEMENT WILDLIFE OVERCROSSINGS OVER INTERSTATE 15

Agreement to Implement Wildlife Overcrossings Over Interstate 15

This Agreement to Implement Wildlife Overcrossings Over Interstate 15 (“**Agreement**”) is entered into as of January 11, 2023 (the “**Effective Date**”) by and among DesertXpress Enterprises, LLC, a Nevada limited liability company d/b/a Brightline West (“**BLW**”); the State of California Department of Transportation (“**Caltrans**”); and the California Department of Fish and Wildlife (“**CDFW**”).

RECITALS

A. BLW proposes to construct a privately owned and operated electrified high-speed passenger railroad between Southern California and Las Vegas, Nevada. The fully grade-separated line will be constructed primarily in the Interstate 15 (“**I-15**”) right of way on an alignment that will largely run in the median of the freeway. The high-speed railroad will be constructed as two projects, one between Las Vegas and Apple Valley, California and the other between Apple Valley and Rancho Cucamonga, California. Together, the two projects will form a single system that will provide high-speed rail service between Rancho Cucamonga and Las Vegas (the “**BLW System**”). The BLW System is projected to provide an estimated 40,000 construction jobs and 1,000 permanent jobs, improve safety, reduce emissions by 400,000 tons of carbon dioxide per year, and support more than \$10 billion of economic impact while improving quality of life and providing an additional transportation option for the region. As further benefits of the BLW System, wildlife protection measures, including improvements such as grated daylight inlets to hundreds of culverts, desert tortoise fencing restoration and installation, directional wildlife exclusionary fencing, and the protection and mimicking of natural transverse drainage patterns, will be made to provide safer passage routes for wildlife within the I-15 corridor.

B. CDFW has prioritized remediation of wildlife barriers through the I-15 in the same corridor where the BLW System will be constructed. Dedicated overcrossings would provide a sustainable and safe path for wildlife connectivity over the existing northbound and southbound highway lanes and the future high-speed rail corridor to be built in the median. CDFW has studied and identified three priority locations (near Zzyzx Road at approximately Caltrans MP R130, near Mountain Pass at approximately Caltrans MP 117, and near Rasor Road at approximately Caltrans MP R117) where the construction of overcrossings across the entire width of the I-15 corridor for use as dedicated wildlife crossings will

protect wildlife, enhance wildlife movement (especially for big-horn sheep,) and connect and enhance wildlife habitats (the “**Wildlife Overcrossings**”).

C. Caltrans is a California state agency with full possession and control of all state highways, property, and rights in property acquired for state highway purposes, and is authorized under sections 90, 91, 91.2, 92, and 660 (et seq.) of the **Streets and Highways Code** and sections 14000(c) and 14520.3(b) of the **Government Code** to oversee impacts to and projects on the California State Highway System (“**SHS**”), including the ability to make final agency decisions regarding the use and disposition of its assets.

D. The parties have worked cooperatively over the past year to develop a coordinated path to implement these Wildlife Overcrossings. They believe that efficiencies are available that will improve the feasibility of constructing the Wildlife Overcrossings if they are constructed concurrently with the current construction implementation schedule of the BLW System. In that context, the parties enter into this Agreement to memorialize their commitment to design and construct the Wildlife Overcrossings.

AGREEMENT

Now, therefore, the parties hereby agree as follows:

Section 1. Cooperation.

1.1 The parties agree to cooperate with each other; federal, state, and local agencies; California Indian Tribes; and other stakeholders in evaluating and pursuing the design, permitting, and construction of Wildlife Overcrossings and will do so as a separate initiative independent from the design, permitting, and construction of the BLW System. In support of this commitment, the parties hereby establish:

1.1.1 A steering committee to be comprised of one representative each from BLW, Caltrans, and CDFW to meet at least monthly to oversee the permitting, design, and construction of the Wildlife Overcrossings.

1.1.2 An Environmental and Technical Advisory Committee (“**ETAC**”) to be comprised of one or more subject-matter experts from BLW, Caltrans, and CDFW to meet weekly to address technical issues referred to it by the steering committee. The ETAC will focus on entitlements, permitting, property acquisition, design, environmental review, and construction.

1.1.3 A Tribal and Stakeholder Outreach Committee (“**TSOC**”) to be comprised of one or more subject-matter experts from BLW, Caltrans, and CDFW to meet weekly to address technical issues referred to it by the steering committee. The TSOC will focus on Tribal notification and consultation; coordination with federal, state, and local agencies; and outreach to stakeholders and the general public.

1.2 The committees established under Section 1.1 will begin meetings within fifteen (15) days after the Effective Date.

Section 2. Roles and Responsibilities.

2.1 BLW Roles and Responsibilities:

2.1.1 BLW will serve a lead cooperative role for all aspects of the design and construction of the Wildlife Overcrossings.

2.1.2 BLW will prepare conceptual design and preliminary cost estimates for the Wildlife Overcrossings, consistent with standards to be evaluated with Caltrans and CDFW. Once the full scope of the Wildlife Overcrossings has been determined, BLW will prepare to the maximum extent possible a design package, consistent with provided standards, to biddable plans and specifications for either a design-bid-build or design-build delivery.

2.1.3 BLW will support Caltrans and CDFW to secure all necessary entitlements and permits.

2.1.4 BLW will provide support for federal and state grant applications.

2.2 Caltrans Roles and Responsibilities:

2.2.1 Caltrans will serve as lead agency for purposes of obtaining, implementing, and renewing resource agency permits, as well as lead agency for any review and compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), including the related Section 106 Tribal consultation.

2.2.2 Caltrans will i) consult with and provide support to BLW with respect to the scope and design of the Wildlife Overcrossings, and ii) oversee any design and construction by BLW of the Wildlife Overcrossings concerning impacts to the SHS.

2.2.3 Caltrans will serve as lead for any Bureau of Land Management (BLM) right of way transfer and Federal Highway Administration authorizations required for the Wildlife Overcrossings.

2.2.4 Caltrans will cooperate with BLW to the maximum extent possible with obtaining any necessary construction permits.

2.2.5 Caltrans will serve as lead for any applications for state and federal grants.

2.2.6 After construction, Caltrans will own and maintain the Wildlife Overcrossings at no cost to the other parties.

2.3 CDFW Roles and Responsibilities:

2.3.1 CDFW will serve as a responsible agency for purposes of CEQA review and compliance and a cooperating agency for purposes of NEPA review and compliance.

2.3.2 CDFW will consult with and provide support to BLW with respect to the design and construction of the Wildlife Overcrossings.

2.3.3 CDFW will serve as lead in outreach to federal, state, and local agencies and stakeholders. CDFW will also support Caltrans' lead for purposes of Tribal notification and consultation.

2.3.4 CDFW will provide support for federal and state grant applications.

2.3.5 CDFW will support Caltrans with respect to any BLM right of way transfer and all permits and entitlements.

2.3.6 CDFW will provide support to Caltrans with respect to its operations and maintenance of the Wildlife Overcrossings.

Section 3. Funding.

3.1 The parties anticipate funding the design, construction, and maintenance of the Wildlife Overcrossings through a combination of cooperative contributions from BLW, Caltrans, CDFW, and the federal government. As of the Effective Date, the estimated cost of the project is unknown, and final allocations of state funds have not been made. To facilitate further project development, the parties agree as follows:

3.1.1 BLW will provide to the maximum extent possible design services for a design package (for either a design-bid-build or design-build delivery method) for the Wildlife Overcrossings at no cost to Caltrans or CDFW. The Wildlife Overcrossings will be designed to accommodate the BLW System, and BLW will not be required to modify the design of the BLW System for the Wildlife Overcrossings. Any design services will include preparation of a preliminary estimate of cost of construction under construction conditions anticipated to involve federal or state funding requirements.

3.1.2 Caltrans has set aside funds to cover seventy-five percent of its internal preliminary estimate of \$125,000,000 for the capital cost of construction of the Wildlife Overcrossings. Once more definitive cost estimates are established by the design package, Caltrans and CDFW will share the capital cost of construction of the Wildlife Overcrossings in proportions or amounts to be determined between those agencies, after securing necessary contributions from the federal government, all at no cost to BLW. As part of its in-kind contribution, BLW will perform construction oversight if needed.

3.1.3. Once construction is complete, Caltrans will own, operate, and maintain the Wildlife Overcrossings at no cost to BLW or CDFW.

3.1.4 The parties will work together in good faith to seek state and federal grants to support the cost of construction of the Wildlife Overcrossings.

Section 4. Further Agreements.

4.1 At appropriate times, the parties will execute such further agreements as are needed to facilitate the design, construction, operation, and maintenance of the Wildlife Overcrossings. Construction of the Wildlife Crossings will begin when full funding for the project is confirmed, all necessary entitlements and permits have been obtained, environmental review is complete, and the parties have executed definitive design, funding, construction, and maintenance agreements. The parties will endeavor to confirm funding, obtain all necessary entitlements and permits, and begin construction by the end of Q3 2023.

4.2 The following principles will apply to negotiating future definitive agreements among the parties related to the Wildlife Overcrossings:

4.2.1 Further agreements will provide indemnification terms to be negotiated that will reflect each party's roles in the development, design, construction, ownership, maintenance, and control of the Wildlife Overcrossings.

4.2.2 Further agreements will provide terms related to responsibilities among the parties for hazardous material management activities.

4.2.3 If federal or state funds are obtained for the construction of the Wildlife Overcrossings, each party will comply with all applicable legal requirements related to use of the funds.

4.2.4 The safe and efficient operation and maintenance of the highway will be maintained during construction of the Wildlife Overcrossings; *provided*, that the parties understand and agree that temporary lane closures may be required from time to time during the construction of the Wildlife Overcrossings. Closures will be subject to traffic control plans approved by Caltrans and will be scheduled at times to mitigate impact to highway use as determined in the sole discretion of Caltrans.

4.2.5 Prior to the start of construction, BLW will ensure that its contractors or subcontractors obtain sufficient construction insurance coverage as agreed to by Caltrans and BLW. Such policy (or policies) will name CDFW, Caltrans, the State of California, and their officers as additional named insureds.

4.2.6 Construction of the Wildlife Overcrossings by BLW will require standard Caltrans encroachment permits to be issued for BLW and its contractors.

4.2.7 If the construction falls within the definition of a public work, the parties will comply with applicable prevailing wage laws under the California Labor Code.

Section 5. Dispute Resolution.

In the event of a dispute or disagreement among BLW, Caltrans, and CDFW staff related to the development of the Wildlife Overcrossings, the following progressive dispute resolution process will be followed:

5.1 Disputes relating to permitting and entitlements or the design or construction of the Wildlife Overcrossings will be referred in writing by any of the parties to the ETAC for resolution. The ETAC will meet within ten (10) days of receipt of a written notice of dispute to seek a resolution.

5.2 Disputes relating to tribal engagement and stakeholder outreach for the Wildlife Overcrossings will be referred in writing by any of the parties to the TSOC for resolution. The TSOC shall meet within ten (10) days of receipt of a notice of dispute to seek a resolution.

5.3 If the ETAC or the TSOC is unable to resolve a dispute referred to it within thirty (30) days of receipt of a written notice of dispute, the dispute will be referred to the Steering Committee for resolution. The Steering Committee will meet within ten (10) days of receipt of a notice of dispute to seek a resolution.

5.4 The parties will first attempt to resolve disputes at the project committee level as described above. If those efforts are unsuccessful, the Caltrans Director, the CDFW Director, and a senior executive of BLW will attempt to negotiate a resolution.

Section 6. Term.

This Agreement will remain in effect for a period of two (2) years from the date first written above, after which any extension will require a written amendment or a new agreement among the parties.

Section 7. Press Releases.

The parties agree to cooperate in the drafting of any press releases, interviews, or other form of media announcements. No party will make any announcement to the media regarding this Agreement without the prior written approval of the other parties.

Section 8. General Terms.

8.1 Appropriations for California Entity Obligations. All Caltrans and CDFW obligations under this Agreement are subject to the appropriation of resources by the Legislature, the State Budget Act authority, and programming and allocation of funds by the California Transportation Commission.

8.2 Governing Law. Except on subjects preempted by federal law, this Agreement will be governed by and construed in accordance with the laws of the State of California.

8.3 Relationship of the Parties. Each party is and will at all times be and remain independent from the other parties and will not be deemed an agent, fiduciary, partner, joint-venturer, employee, or employer of the other parties. Nothing contained herein will have the effect of creating a trust, joint venture, partnership, or employment relationship among the parties. None of the parties has any right or power to obligate or bind another party in any manner whatsoever.

8.4 Amendments. This Agreement may only be modified or changed by written amendment or acknowledgement signed by authorized representatives of all parties.

8.5 Public Records. Pursuant to the California Public Records Act codified at section 6250 et seq. of the Government Code, certain information or documents in the possession or control of public entities are open to public inspection and

copying. The parties acknowledge that upon receipt of a valid request under the California Public Records Act for documents related to this Agreement, Caltrans and CDFW will have a duty to disclose unless a particular record is exempt by statute or dispositive decisional law.

8.6 Notices. Any communication, notice, or demand of any kind whatsoever which a party may be required or may desire to give to or serve upon another party must be in writing and delivered by personal service (including express or courier service) or by registered or certified mail, postage prepaid, return receipt requested, or by a nationally recognized overnight delivery service, in each case addressed as follows:

BLW: DesertXpress Enterprises, LLC
Attn: Sarah Watterson, President
3920 W. Hacienda Ave.
Las Vegas, NV 89118

With a copy to:

David Pickett
Associate General Counsel
DesertXpress Enterprises, LLC
3920 W. Hacienda Ave.
Las Vegas, NV 89118

Caltrans: California Department of Transportation
Attn: Rebecca Guirado, District 8 Director (Acting)
District 8 – Program/Project Management
464 W. Fourth St., MS-1229
San Bernardino, CA 92401

With a copy to:

California Department of Transportation,
Legal Division
Attn: Julie Del Rivo, Assistant Chief Counsel
100 S. Main Street, Suite 1300
Los Angeles, CA 90012

CDFW: California Department of Fish and Wildlife
Attn: Heidi Calvert, Regional Manager,
Inland Deserts Region
P.O. Box 944209
Sacramento, CA 94244

With a copy to:

California Department of Fish and Wildlife
Office of the General Counsel
Attention: Steven Ingram
P.O. Box 944209
Sacramento, CA 94244

Without requiring an amendment to this Agreement, any party may change its address for notice by written notice given to the other party in the manner provided in this Section. Any such communication, notice, or demand will be deemed to have been duly given or served on the date personally served, if by personal service; three (3) days after being placed in the U.S. Mail, if mailed; or one (1) business day after being delivered to an overnight delivery service, if sent by overnight delivery.

8.7 No Third-Party Beneficiaries. This Agreement is for the exclusive benefit of the parties and not for the benefit of any third party.

8.8 Severability. If any provision of this Agreement, or the application of a provision to any person, place, or circumstance, is held by a court of competent jurisdiction to be invalid, void, or otherwise unenforceable, such provision will be enforced to the maximum extent possible so as to effect the intent of the parties; or, if incapable of such enforcement or unable to achieve the intent of the parties, will be deemed to be deleted, and the remainder of this Agreement and such provisions as applied to other persons, places, and circumstances will remain in full force and effect. In such an event, the parties agree to negotiate an amendment to replace or modify any invalid or illegal or unenforceable provision and related provisions with valid, legal, and enforceable provisions that most closely and reasonably approximate the intent and economic effect of the invalid, illegal, or unenforceable provision.

8.9 Entire Agreement. This Agreement reflects the entire agreement of the parties with respect to the subject matter hereof and supersedes all prior or contemporaneous oral or written understandings, statements, representations and promises.

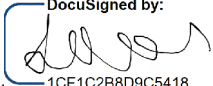
8.10 Counterparts. This Agreement may be signed in counterparts, including in electronic format, each of which will be deemed an original but all of which will together constitute one and the same instrument.

[Signature Page Follows]

The parties have executed this Agreement as of the Effective Date.

DESERTXPRESS ENTERPRISES, LLC

**CALIFORNIA DEPARTMENT
OF TRANSPORTATION**

DocuSigned by:

By: 1CF1C2B8D9C5418...
Sarah Watterson
President
DesertXpress Enterprises, LLC

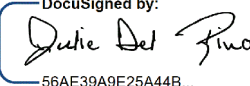

By: _____
Tony Tavares
Director
California Dept. of Transportation

Approved as to Form:

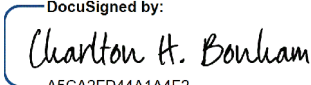
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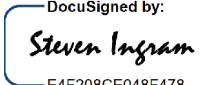
By: 313B327C99534FB...
David Pickett
Associate General Counsel
DesertXpress Enterprises, LLC

DocuSigned by:

By: 56AE39A9E25A44B...
Julie Del Rivo
Assistant Chief Counsel
California Dept. of Transportation

**CALIFORNIA DEPARTMENT
OF FISH AND WILDLIFE**

DocuSigned by:

By: A5CA2FD44A1A4F2...
Charlton H. Bonham
Director
California Dept. of Fish and Wildlife

Approved as to Form:

DocuSigned by:

By: E4F208CE048F478...
Steven Ingram
Assistant Chief Counsel
California Dept. of Fish and Wildlife

Attachment O

PROJECT CATEGORY ASSIGNMENT

Memorandum

To: MAHMUDA AKHTER
ACTING DEPUTY DISTRICT DIRECTOR
DESIGN

Date: April 12, 2023

File: 08-SBD-15-PM R114.0/171.5
I-15 wildlife crossings
EA: 1N590
Project ID: 0823000021

From: MINDY BUI *AMB*
Branch Chief
Pre-Programming/Engineering Studies

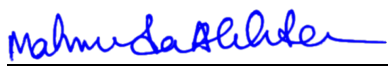
Subject: APPROVAL OF PROJECT CATEGORY ASSIGNMENT

In accordance with Chapter 8, Section 5 of the Project Development Procedures Manual, your approval is requested to assign this project to Category 5.

Planning Unit is preparing a Project Initiation Report (PIR) for the above referenced project. The project scope consists of constructing vegetated wildlife crossings and fencing in the Mojave Desert at three locations along Interstate 15 (I-15) near Cave Mountain (PM R116.70), Soda Mountain (PM R129.75), and Clark Mountain (PM 168.05).

Category 5 is recommended based on the following considerations:

This project has minimal economic, social, and environmental signification and does not increase traffic capacity.

Approved by: 
MAHMUDA AKHTER
CQ Acting Deputy District Director
Design

04/12/2023

Date

Attachments:
(1) Location Map

C:

Attachment P

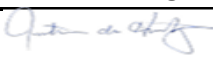
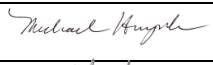
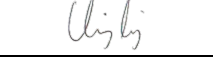
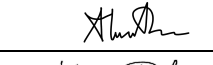
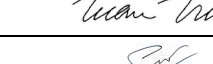
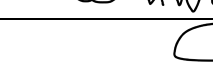
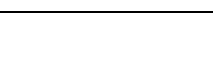
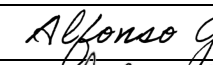
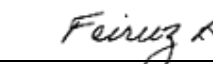
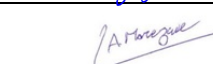
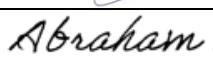
JOINT FIELD VISIT SIGN-IN SHEET

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 8 DIVISION OF DESIGN FIELD REVIEW MEETINGS

Contract Number-Project I.D. Number EA 1N590- 08230000021	County, Route, Post Mile SBD, I-15, R114.0/171.5	Federal Aid Number
Project Description Construct Wildlife crossings and fencing in the Mojave Desert at three locations alone I-15.		

Instructions: The Project Engineer (PE) shall coordinate with the Project Manager to facilitate the field meetings with representatives from the eight Divisions. The joint field meetings shall be held pre-design/Phase 0 and within 2 weeks of the 60% design plans in Phase 1. The PE shall submit the completed sign-in sheet(s) with the design package to the District Office Engineer (DOE). Incomplete submittals will not proceed and DOE will forward to the Design Manager.

Phase 0 – Aug 17, 2023

Division	Print Name	Signature	Date
Design	Jonathan Den Hartog		
	Michael Huynh		
	Aung Naing		
	Huu Ngo		11/08/23
	Karen Pham		11/08/2023
	Tuan Truong		
	Ha Vu		
	Dat Wong		11/08/2023
Maintenance	Lynd Allen		
Construction	Xavier Quintanar		
	Alfonso Gonzales		11/08/2023
	John Santos		11/8/2023
Right of Way	Al Ehieze-Okeke		
Right of Way Engineering	Thomas Oatman		
Environmental	Alisha Curtis		
	Tyrha Delger		
	Andrew Walters		11/08/2023
PPM	Nader Naguib		11/13/2023
Traffic Design	Tran Hoang		
Traffic Ops	Rithy Sar		
OSFP	Feiruz Abera		
	Saygunn Low		11/8/2023
	Reza Mortezaie		11/8/2023
Bridge Architect	Abraham Almaw		11/08/23
	Morgan Itzel		
	Ben Wells		

Bridge Design	Jason Chou		
Landscape Architect	Miriam Bishop	Miriam Bishop	
	Steve Magallanes		
Storm Water Quality	Alan Nakano	Alan Nakano	

Arturo

Attachment Q

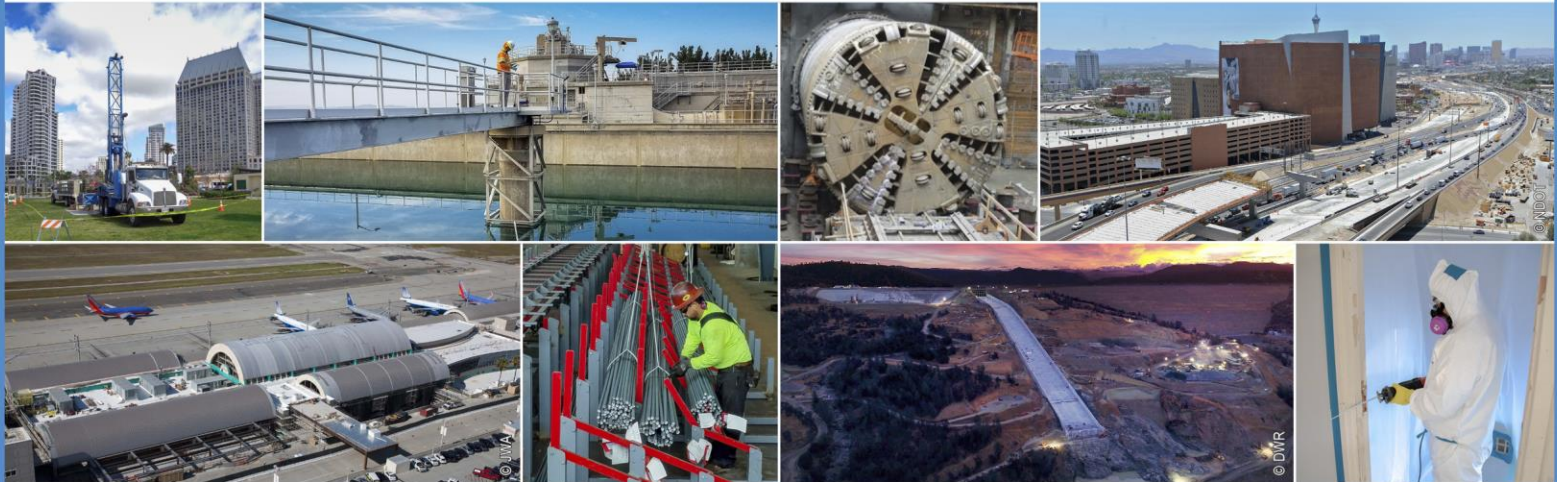
STRUCTURE PRELIMINARY GEOTECHNICAL REPORT

Structure Preliminary Geotechnical Report (SPGR) Cady Mountain Wildlife Crossing Brightline West High-Speed Railway Project Cronese Valley, California 08-SBd-15-PM 116.69

Brightline West

3920 West Hacienda Avenue | Las Vegas, Nevada 89118

April 17, 2023 | Project No. 211570003



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

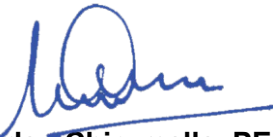
Structure Preliminary Geotechnical Report (SPGR)
Cady Mountain Wildlife Crossing
Brightline West High-Speed Railway Project
Cronese Valley, California
08-SBd-15-PM 116.69

Mr. Adrian Share, PE
Brightline West
3920 West Hacienda Avenue | Las Vegas, Nevada 89118

April 17, 2023 | Project No. 211570003



Spencer Marcinek, PE, GE
Senior Project Engineer



Madan Chirumalla, PE, GE
Principal Engineer



SCM/MAC/RDH/mlc



Ronald Hallum, PG, CEG
Principal Geologist



CONTENTS

1	INTRODUCTION	1
2	SCOPE OF SERVICES	1
3	PROJECT DESCRIPTION	1
4	GEOTECHNICAL INVESTIGATION	2
5	GEOTECHNICAL CONDITIONS	2
5.1	Surface Conditions	2
5.2	Regional Geologic Setting	3
5.3	Local Geologic Setting and Subsurface Conditions	3
5.4	Groundwater	4
6	AS-BUILT DATA	4
7	SCOUR DATA	5
8	CORROSIVITY	6
9	FAULTING AND SEISMICITY	6
9.1	Surface Fault Rupture	7
9.2	Ground Motion	7
9.3	Liquefaction Potential	7
9.4	Seismic Slope Stability	8
10	PRELIMINARY GEOTECHNICAL RECOMMENDATIONS	8
11	ADDITIONAL FIELD WORK AND LABORATORY TESTING	9
12	LIMITATIONS	10
13	REFERENCES	11

TABLES

1 – CIDH Pile Data	5
2 – Spread Footing Data	5

FIGURES

1 – Site Location
2 – Regional Geology
3 – Fault Locations
4 – Acceleration Response Spectrum

APPENDICES

A – Conceptual Exhibits

B – As-Built Plans (Bird Ditch Bridge)

1 INTRODUCTION

In accordance with your request and authorization, we have prepared a Structure Preliminary Geotechnical Report (SPGR) for the Cady Mountain Wildlife Crossing Project in Cronese Valley, California (Figure 1). The wildlife crossing is planned as part of the construction of the Brightline West High-Speed Railway Project. The project is currently in the preliminary design phase and the purpose of our study was to evaluate the soil, geologic, and groundwater conditions at the project site and to provide preliminary recommendations regarding the geotechnical aspects of the project based on our background review and site reconnaissance. Our SPGR was prepared in general accordance with the California Department of Transportation (Caltrans) guidelines. During subsequent design phases, we will prepare a Preliminary Foundation Report (PFR) and Foundation Report (FR) for the project. These reports will include subsurface evaluation, laboratory testing, geotechnical engineering analysis, and will present our updated conclusions and recommendations for design and construction of the project. We have previously submitted the SPGR dated March 30, 2023 for this project. Subsequent to our report, another bridge alternative conceptual exhibit was provided to us. Our report is updated to include this bridge alternative.

2 SCOPE OF SERVICES

Our report was prepared in general accordance with Section 2, Structure Preliminary Geotechnical Report, from the Caltrans Guidelines for Foundation Reports for Bridges (Caltrans, 2021a). The scope of our geotechnical services included the following:

- Project coordination and consultation with the project team.
- Review of readily available background materials, including geologic and seismic hazard maps, published literature, stereoscopic aerial photographs, in-house information, existing plans, reports, and previous log of test borings for a nearby bridge.
- Performance of a geotechnical site reconnaissance to observe existing conditions at the location of the Cady Mountain Wildlife Crossing.
- Data compilation and engineering analysis of the information obtained from our background review and site reconnaissance.
- Preparation of this SPGR in general accordance with Caltrans guidelines.

3 PROJECT DESCRIPTION

The proposed Cady Mountain Wildlife Crossing is located in Cronese Valley, California (approximately 41 miles northeast of the city of Barstow). The proposed bridge crosses over Interstate 15 (I-15) at Post Mile 116.69 (Appendix A). The nearest existing bridge to the site is

Bird Ditch Bridge, which is located approximately 1.3 miles west of the site. The Cady Mountain Wildlife Crossing may consist of a three-vault (two for north-bound and south-bound I-15 traffic and one for the railroad alignment) bridge providing wildlife access between the north and south sides of the alignment. The structure may consist of structural backfill between mechanically stabilized earth walls. Another bridge alternative may consist of cast-in-place/prestressed (CIP/PS) concrete box girder supported on approximately 6 feet diameter columns. We anticipate that earthwork at the site will consist of construction of fill slopes, relatively minor cuts and fills to prepare the area for site drainage, foundation excavations, trenching and backfilling for new utilities, and grading for the new pavement and landscaping areas. The length of the wildlife crossing is proposed to be approximately 295 feet and the maximum height is anticipated to be approximately 31 feet (Appendix A). Conceptual exhibits of the wildlife crossing are presented in Appendix A. The CIP/PS bridge alternative conceptual exhibit shows a slightly different location (Post Mile and Station Numbers). Based on our discussions with the client, we understand that the CIP/PS bridge alternative conceptual exhibits were prepared in the past and will be revised to show the correct proposed bridge location (Post Mile 116.69) during the next phase.

4 GEOTECHNICAL INVESTIGATION

A California-certified engineering geologist from Ninyo & Moore visited the site on March 20, 2023. The surface and geologic conditions were observed and written and photographic documentation of the site were made.

Previous geotechnical investigation within the site vicinity includes a study performed by the State of California for the Bird Ditch Bridge (Bridge No. 54-238 R/L) located approximately 1.3 miles to the west. Three borings were performed by the State of California in 1957, for Bird Ditch Bridge to depths ranging from approximately 12 to 35 feet below the ground surface. Two additional borings were performed by Caltrans in 2003, for the widening of Bird Ditch Bridge to depths ranging from approximately 79 to 89 feet below the ground surface. The Log of Test Boring sheets are presented in Appendix B.

5 GEOTECHNICAL CONDITIONS

The following sections describe the surface, geologic, soil, and groundwater conditions at the site.

5.1 Surface Conditions

The site is located within a valley along the I-15 corridor between a northerly ascending slope to the north and a southerly ascending slope to the south. The terrain along I-15 at the site is relatively flat and gently slopes down towards the northeast. Ground elevations within the wildlife

crossing area range from approximately 1,423 feet above Mean Sea Level (MSL) within a drainage area on the north side of I-15 to approximately 1,446 feet above MSL on the south side of I-15 (Appendix A). Loose cobbles and boulders were observed on the hillsides of the proposed wildlife crossing indicating a potential hazard for rockfalls during grading or during storms and earthquakes. The site latitude and longitude are approximately 35.08689 degrees north and -116.32721 degrees west, respectively (Google Earth, 2023).

Two drainage areas are shown on the conceptual plan, one on the north side of I-15 and one on the south side of I-15 (Brightline West, 2023). Drainage is generally by sheet flow to existing storm drain catch basins within the center median of I-15.

5.2 Regional Geologic Setting

The proposed wildlife crossing is located within the Mojave Desert Geomorphic Province of California and is characterized by mountain ranges and hills of moderate relief that are partially buried and separated by broad alluviated basins. The valleys in the Mojave Desert province are proportionally broader and mountains are more widely spaced and the mountains generally do not stand as high above their surroundings as in the neighboring Basin and Range province and Transverse Ranges province (Norris and Webb, 1990).

The mountain ranges and hills within the Mojave Desert province are comprised primarily of Mesozoic era (65 to 245 million years old) granitic and volcanic rocks and Paleozoic era (245 to 570 million years old) metamorphic rocks. These rocks generally include Mesozoic era granite, quartz monzonite, and porphyritic volcanic rocks and Paleozoic era gneiss and limestone. Some Tertiary age (2 to 65 million years old) surface exposures of non-marine volcanic and sedimentary rocks are mapped east of Barstow, in the Soda Mountains and in the Jean Hills area. Valleys, drainage areas, and alluvial fans along the flanks of mountains and valleys are underlain at depth by the basement rocks described above but have been filled by Quaternary age (last 2 million years) stream and lake deposits, alluvial fan deposits, and other alluvial sediments.

5.3 Local Geologic Setting and Subsurface Conditions

Published geologic maps indicate that the central and southern portions of the proposed wildlife crossing are underlain by Holocene-age alluvial sediments consisting of unconsolidated, undissected river terrace gravel (Dibblee, 2008). The northern end of the wildlife crossing is underlain by Late Jurassic-Early Cretaceous plutonic igneous rocks consisting of granite to quartz diorite (light gray, massive, medium- to coarse-grained) (Dibblee, 2008). In addition to the bedrock and alluvial soils, artificial fills associated with the construction of I-15 were also observed at the site. These materials were observed to be up to roughly 10 feet in depth and consist of poorly

consolidated sandy cobble gravel and gravelly sands. A regional geologic map for the site vicinity is shown on Figure 2.

Materials encountered during the previous subsurface evaluations at Bird Ditch Bridge (located approximately 1.3 miles to the west of the subject site) consisted of artificial fill, alluvium, and gneiss bedrock. Up to 14 feet of fill was encountered in the two borings drilled for the widening of Bird Ditch Bridge (Caltrans, 2004). Alluvium was encountered beneath the fill to depths ranging from approximately 39 to 53 feet below the ground surface. The fill and alluvium generally consisted of dry, loose to very dense, well-graded sand, poorly graded sand, well-graded sand with silt, poorly graded sand with silt, silty sand, and clayey gravel. Gravel layers, cobbles, and boulders were present in the fill and alluvium. The gneissic bedrock was generally described as gray, intensely weathered to fresh, soft to very hard (increasing density with depth), and intensely to moderately fractured.

5.4 Groundwater

Groundwater was not encountered in the exploratory borings during the previous subsurface explorations in 1957 and 2003 for Bird Ditch Bridge to the depth explored of up to approximately 89 feet below the ground surface. Groundwater monitoring data from the State of California Department of Water Resources (2023) indicates groundwater depth fluctuations from 28 to 200 feet below the ground surface between 1965 and 2022 based on information from five monitoring wells located within an approximately eight-mile radius from the site (along I-15 from Dunn to the south to Cronise Valley to the north). It should be noted that the ground surface elevations in Cronise Valley are on the order of 350 feet lower than the ground surface elevation of the proposed Cady Mountain wildlife crossing. Groundwater levels are subject to variation due to seasonal rainfall, irrigation, groundwater pumping, subsurface stratigraphy, topography, and other conditions. The groundwater depths at the site should be further evaluated during a subsequent design phase.

6 AS-BUILT DATA

As noted, the nearest existing bridge to the site is Bird Ditch Bridge, which is located approximately 1.3 miles west of the site. The as-built data of the Bird Ditch Bridge, Bridge No. 54-238 R/L, is discussed in this section. The as-built plans and the foundation recommendations for bridge widening letter (State of California, 1964 and Caltrans, 2004) indicate that the original Bird Ditch Road Bridge was constructed in 1964 and consists of a two-span, pre-cast concrete slab, girder deck bridge supported on spread footings. There are two abutments (Abutments 1 and 3) and one 4-column bent (Bent 2). The original length and width of the bridge were 55 and 42 feet, respectively. The bridge was widened after 2004 by approximately 24 feet to the south with 10-

foot shoulders on both sides. For the widening, Abutments 1 and 3 are supported on cast-in-drilled-hole (CIDH) piles and Bent 2 is supported on a spread footing. The foundation data of the CIDH piles and spread footings for the bridge widening based on the foundation recommendations for bridge widening letter (Caltrans, 2004) are presented below in Tables 1 and 2, respectively. The as-built plans are presented in Appendix B.

Table 1 – CIDH Pile Data

Location	Pile Type	Design Load (tons)	Nominal Resistance		Design Tip Elevation (feet)	Specified Tip Elevation (feet)
			Compression (tons)	Tension (tons)		
Abutment 1	CIDH 2 feet	67.5	135	0	1,502.7	1,502.7
Abutment 3	CIDH 2 feet	67.5	135	0	1,502.7	1,502.7

Table 2 – Spread Footing Data

Location	Minimum Footing Width (feet)	Bottom of Subexcavation (feet)	Bottom of Footing Elevation (feet)	Recommended Soil Bearing Pressure	
				ASD	LFD
				Gross Allowable Soil Bearing Pressure (ksf)	Ultimate Soil Bearing Pressure (ksf)
Bent 2	5.25	N/A	1,525.7	N/A	10

Notes:

ASD – Allowable Stress Design

LFD – Load Factor Design

ksf – kips per square foot

7 SCOUR DATA

Due to the presence of storm drain catch basins within the center median of I-15 and drainage channels located along the north and south sides of I-15 (Brightline West, 2023), the proposed wildlife crossing extends across known water courses. The near-surface artificial fill and alluvium, are considered potentially scourable. Since the site extends over known water courses and since the hydrology/hydraulic details were not available for our review at the time of this evaluation, we recommend that scour depth be evaluated by the civil engineer during a subsequent design phase. We anticipate that the proposed improvements will handle much of the surface runoff during periods of precipitation.

Based on the foundation recommendations letter for the widening of Bird Ditch Road Bridge, there is no history of significant scour or drift problems at the site (Caltrans, 2004). The potential local pier scour for Bent 2 was calculated to be 3.9 feet based on a pier dimension of 1.3 feet. We anticipate similar scour conditions for the Cady Mountain Wildlife Crossing.

8 CORROSIVITY

There was no historical corrosion data at the site available for our review at the time of our evaluation. However, corrosivity testing was performed on a nearby soil sample during the geotechnical evaluation for the widening of Bird Ditch Road Bridge (Caltrans, 2004). The soil pH of the sample tested was measured at 8.8 and the electrical resistivity was measured at 740 ohm-centimeters. The chloride content was measured at 137 parts per million (ppm). The sulfate content was measured at 0.067 percent by weight (i.e., 671 ppm). Based on the laboratory test results and Caltrans corrosion criteria (2021d), the project site can be classified as a corrosive site. Caltrans currently considers a site to be corrosive to foundation elements if the minimum electrical resistivity 1,500 ohm-cm or less, chloride concentration is 500 ppm or more, sulfate concentration is 1,500 ppm or more, or the pH is 5.5 or less. During our previous geotechnical evaluation for the North Segment of the Brightline West High-Speed Railway Project (Ninyo & Moore, 2022), we performed 74 corrosivity laboratory tests (pH, electrical resistivity, water-soluble chloride content, and water-soluble sulfate content) on near-surface samples from borings spaced between Barstow, California, and the California-Nevada state line. Based on the laboratory test results and Caltrans corrosion criteria (2021d), 28 out of 74 of the samples can be classified as a corrosive. For preliminary design purposes we anticipate that the Cady Mountain Wildlife Crossing project site can be classified as a corrosive site. The on-site materials should be tested for corrosive properties during the subsequent design phase.

9 FAULTING AND SEISMICITY

The site is in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant during the design life of the proposed project. Figure 3 shows the approximate site location relative to the major faults in the region. The site is not located within a State of California Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone) (Hart and Bryant, 2018). The nearest mapped active fault to the site is the Manix-Afton Hills fault located approximately 3.7 miles south of the site (United States Geological Survey [USGS], 2023a). There is an unnamed fault mapped as crossing through the southern boundary of the site (Figures 2 and 3); however, the fault is inferred and concealed by Quaternary-age alluvial deposits. The fault is not considered to be an active

fault as defined by the California Geological Survey (CGS), which are faults that have ruptured within Holocene time, or within approximately the last roughly 11,000 years.

In general, seismic hazards that could impact the project include ground surface rupture, strong ground motion, liquefaction, and seismic slope stability that are discussed in the following sections.

9.1 Surface Fault Rupture

Based on our review of the referenced literature, no active faults are known to cross the project site. Therefore, the probability of damage from surface ground rupture is considered to be low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

9.2 Ground Motion

Considering the proximity of the site to active faults capable of producing a maximum magnitude ($M_{\max}$) of 6.0 or more, the project area has a high potential for experiencing strong ground motion. Version 3.02 of the Caltrans Acceleration Response Spectra (ARS) online tool (Caltrans, 2023) was used to calculate the design seismic event with respect to the proposed improvements. The design ARS represents the United States Geological Survey (USGS, 2014) 5 percent in 50 years hazard at 5 percent damping and includes near-fault effects and basin amplification effects.

The input parameters for the Caltrans ARS online tool consist of the site latitude, site longitude, and average shear wave velocity (V_s) in the upper 100 feet (i.e., 30 meters) (V_{s30}). Based on our review of CGS shear wave velocity map, the V_{s30} is estimated to be approximately 1,155 feet per second (352 meters per second) (CGS, 2015). This shear wave velocity is representative of a site mapped on very dense soil or soft rock. The preliminary design ARS curve evaluated for the site is presented on Figure 4. The calculated peak ground acceleration (PGA) is 0.39g and the mean moment magnitude is 6.45. The V_{s30} should be evaluated during a subsequent design phase and the design ARS curve and PGA should be updated accordingly, as applicable.

9.3 Liquefaction Potential

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils

at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

According to San Bernardino County Land Use Plan (2007), the project site is not located in an area mapped as being susceptible to liquefaction. Groundwater was not encountered in the previous borings at Bird Ditch Road Bridge to a depth of 89 feet. Based on the historic depth to groundwater and the presence of shallow bedrock and relatively dense sand with gravel, cobbles, and boulders, it is our opinion that liquefaction and liquefaction-related seismic hazards (e.g., dynamic settlement, ground subsidence, and/or lateral spreading) are not design considerations for the project.

9.4 Seismic Slope Stability

Based on the conceptual exhibits (Appendix A), significant grading of the hillside slopes is not planned for the project. Minor grading may consist of benching of the slopes to place compacted fill for the bridge approach embankments. On a preliminary basis, seismic slope stability is not anticipated to be a design consideration for the project. However, the project is currently in conceptual design and the structure details may be subject to change. Seismic slope stability should be further evaluated during the design phase when detailed plans are available. As noted, loose cobbles and boulders were observed on the hillsides of the proposed wildlife crossing indicating a potential hazard for rockfalls during grading or during storms and earthquakes.

10 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

The purpose of this SPGR was to perform a preliminary evaluation of the soil, geologic, and groundwater conditions in the area of the proposed improvements for general planning purposes. Based on our preliminary evaluation, it is our opinion that the project is feasible from a geotechnical perspective. A detailed geotechnical evaluation will be performed during a subsequent design phase, including the PFR and FR, to develop appropriate design and construction recommendations for the project.

We anticipate that, from a geotechnical perspective, the wildlife crossing may be supported on shallow foundations. One of the geotechnical considerations for the shallow foundations include differential settlement between the foundations supported on differing geologic units (i.e., alluvium and bedrock). Based on our site reconnaissance and background review, bedrock is mapped on the north side of the wildlife crossing and alluvium is mapped on the south side of the wildlife crossing; therefore, remedial grading consisting of removing fill and loose alluvium to expose firm and unyielding alluvium or bedrock should be anticipated during construction. The depth of fill,

potential presence of underground utilities or other improvements, and the depth and lateral extent of excavations for foundation construction can potentially impact the feasibility of shallow foundations. The feasibility of shallow foundations should be further evaluated during the subsequent design phase. Settlement calculations for the shallow foundations should also be performed during a subsequent design phase, as applicable.

Deep foundations may also be utilized for the bridge. If deep foundations are used for the project, we would recommend cast-in-drilled-hole (CIDH) piles. However, due to the potential for difficult drilled excavations into cohesionless fill and alluvial soils and dense bedrock to construct CIDH piles, shallow foundations are the preferred alternative from a geotechnical perspective. Driven piles are not recommended due to the presence of shallow bedrock, dense gravel, cobbles, and boulders, and the potential for difficult driving conditions or driving refusal at shallow depths.

In general, the proposed wildlife crossing design should be prepared in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Bridge Design Specifications (2020), the Caltrans California Amendments to the AASHTO LRFD Bridge Design Specifications (2019d), and other applicable Caltrans design manuals.

11 ADDITIONAL FIELD WORK AND LABORATORY TESTING

The available subsurface information does not provide sufficient data to complete the design recommendations for Cady Mountain Wildlife Crossing. This geotechnical report was performed for preliminary planning purposes. The project is currently in conceptual design and the structure details may be subject to change. During a subsequent design phase, Ninyo & Moore will perform additional geotechnical evaluations. The additional geotechnical evaluations would consist of obtaining the excavation and boring permits, subsurface exploration, geotechnical laboratory testing, and engineering analysis. Due to the presence of shallow bedrock, gravel, cobbles, and boulders, pushing cone penetration test (CPT) soundings to target depths may not be successful. Borings are anticipated to extend to a depth of 20 feet below the proposed foundation bottoms or up to approximately 60 feet below the ground surface or refusal. We anticipate that the additional subsurface exploration will be performed in the center median and shoulder of I-15. Geotechnical laboratory testing is anticipated to consist of moisture content and dry density, grain size (sieve) analysis, expansion index, direct shear, and corrosivity, as applicable. The design of project improvements should be based on the subsequent geotechnical evaluation results and recommendations.

12 LIMITATIONS

This report is based on review of data collected by others. No subsurface exploration or laboratory testing at the site was performed by Ninyo & Moore. Our findings are based, in part, on the veracity of the data prepared by others. The geotechnical evaluation presented in this report has been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every surface and/or subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended exclusively for use by the client and for preliminary design. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

13 REFERENCES

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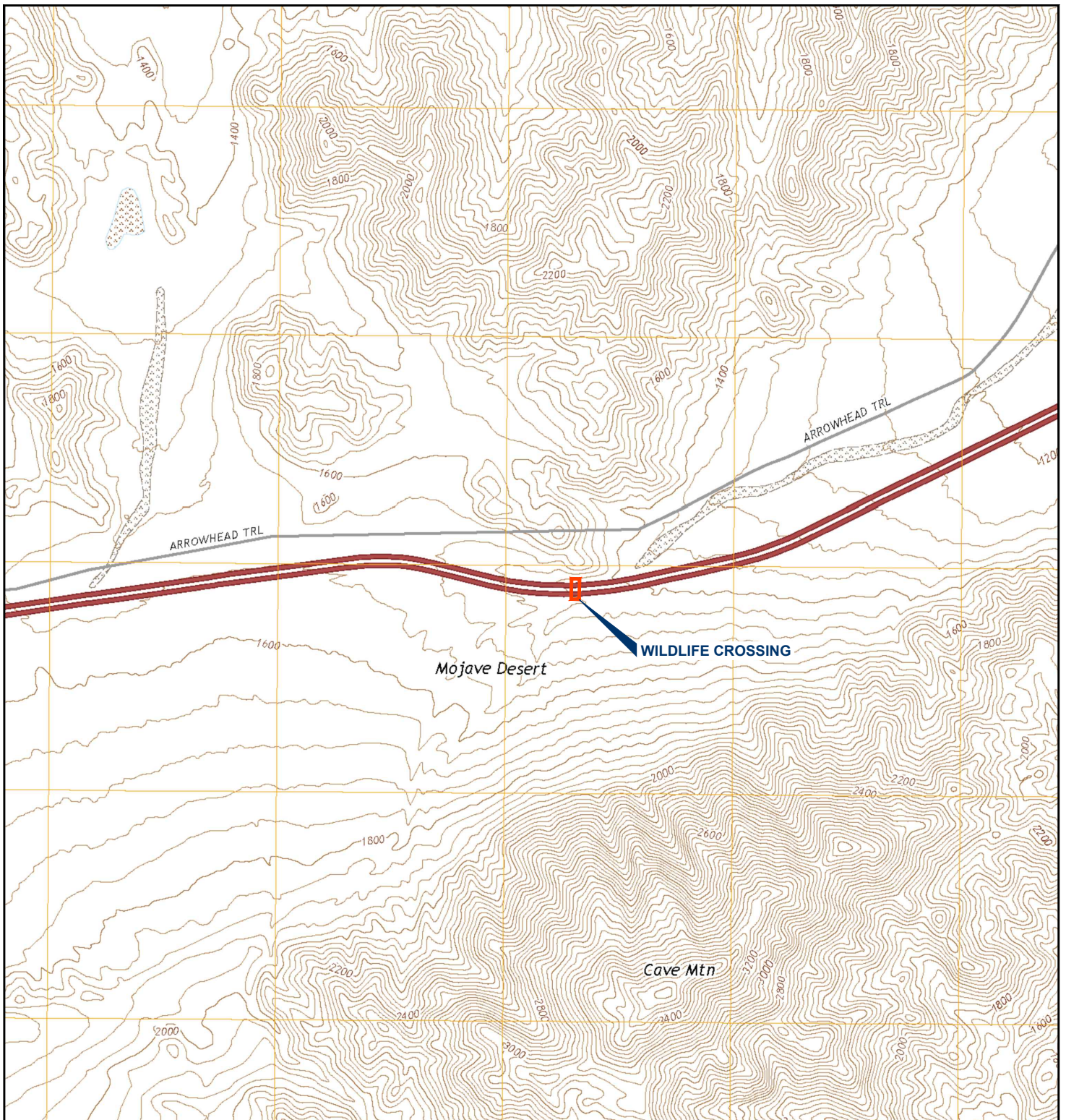
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FIGURES

211570003_SL.dwg (CADDY) 03/29/2023 JDP



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: USGS, 2018.

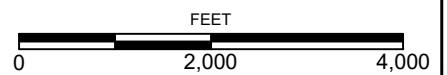
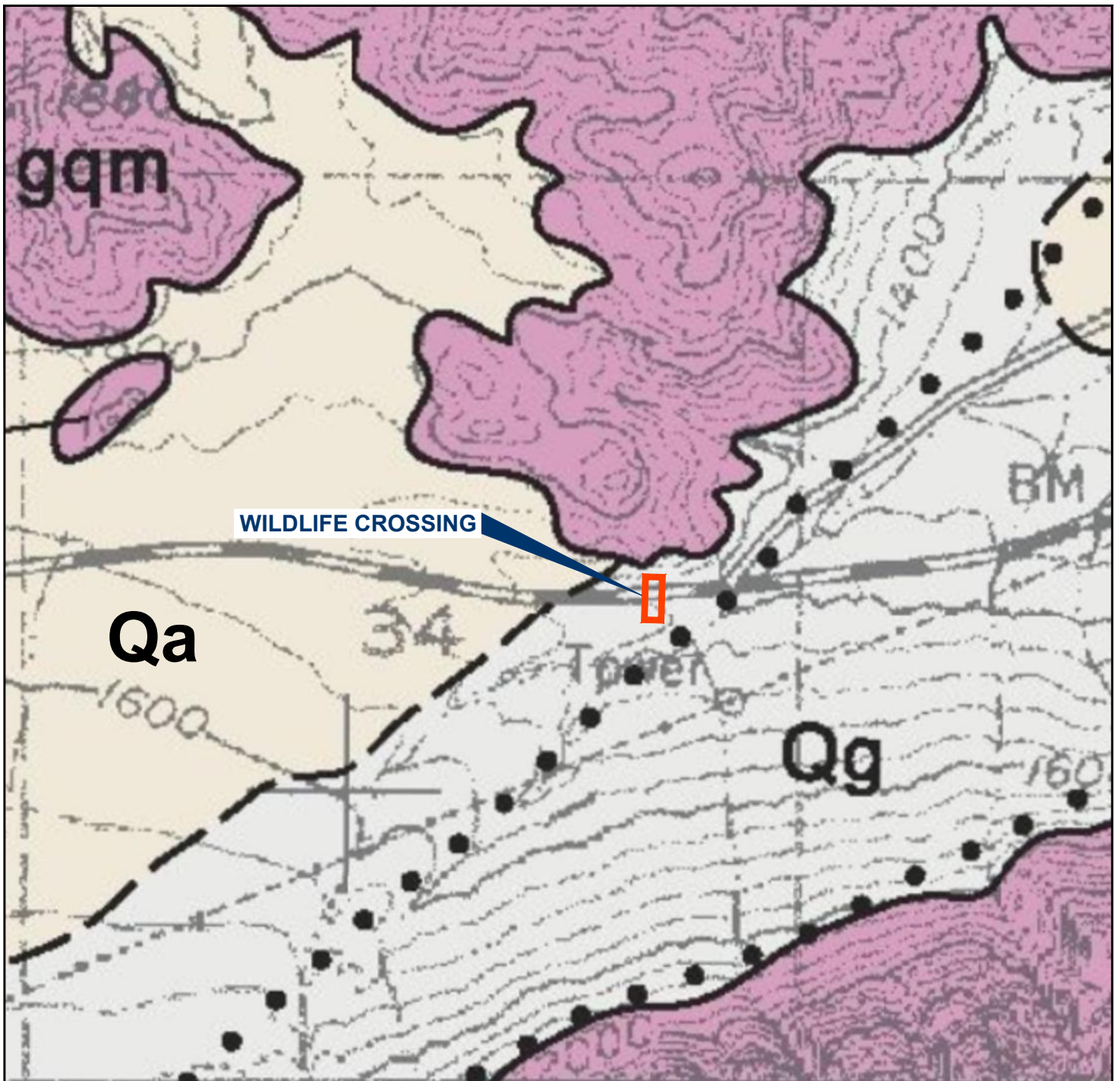


FIGURE 1



LEGEND

Qa	ALLUVIUM		WILDLIFE CROSSING
Qg	RIVER TERRACE GRAVEL		GEOLOGIC CONTACT
gqm	GRANITE TO QUARTZ MONZONITE		FAULT; DASHED WHERE INFERRED, DOTTED WHERE CONCEALED

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: DIBBLEE, 2008.

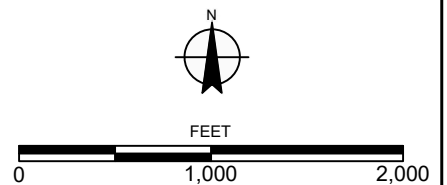


FIGURE 2

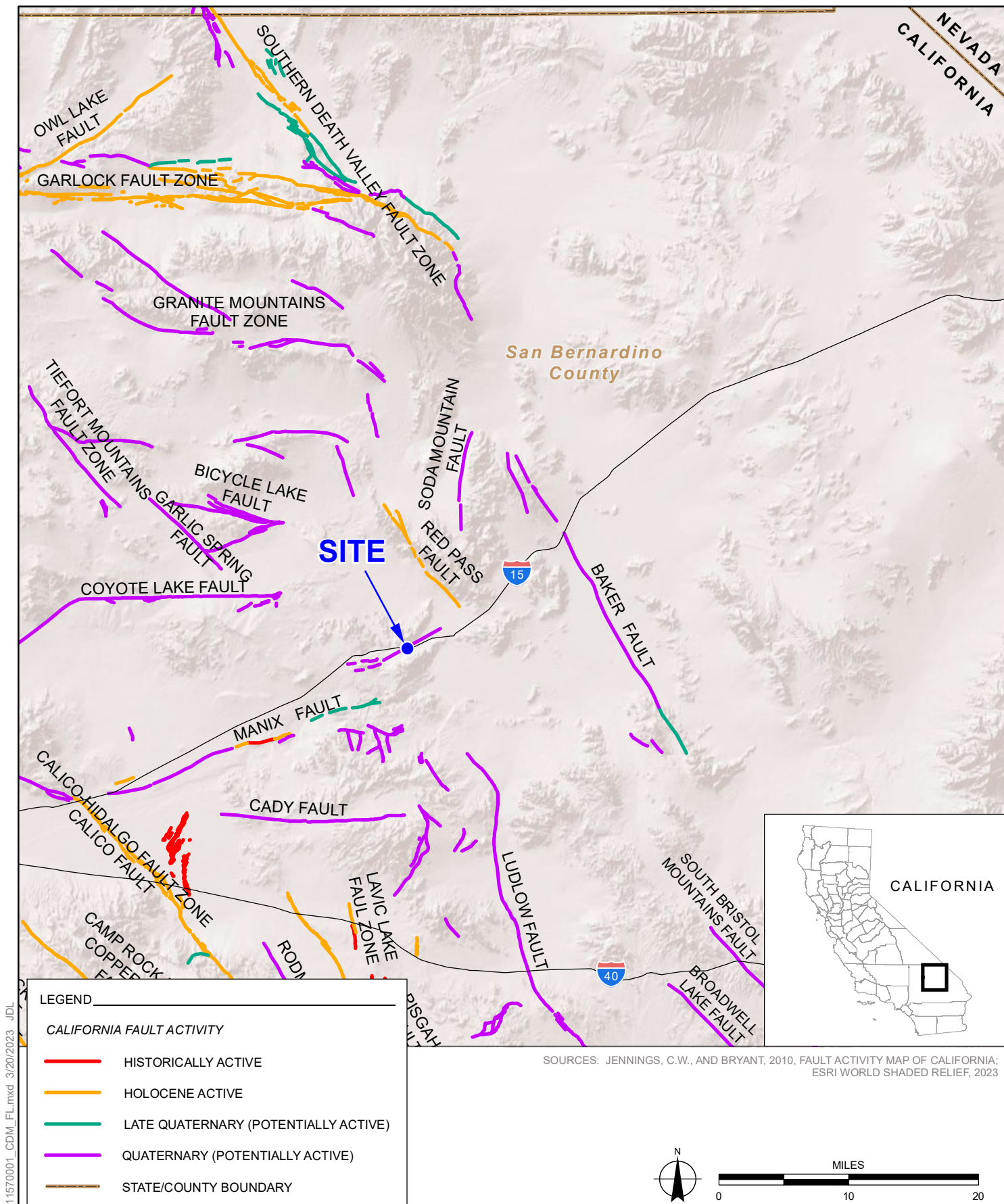
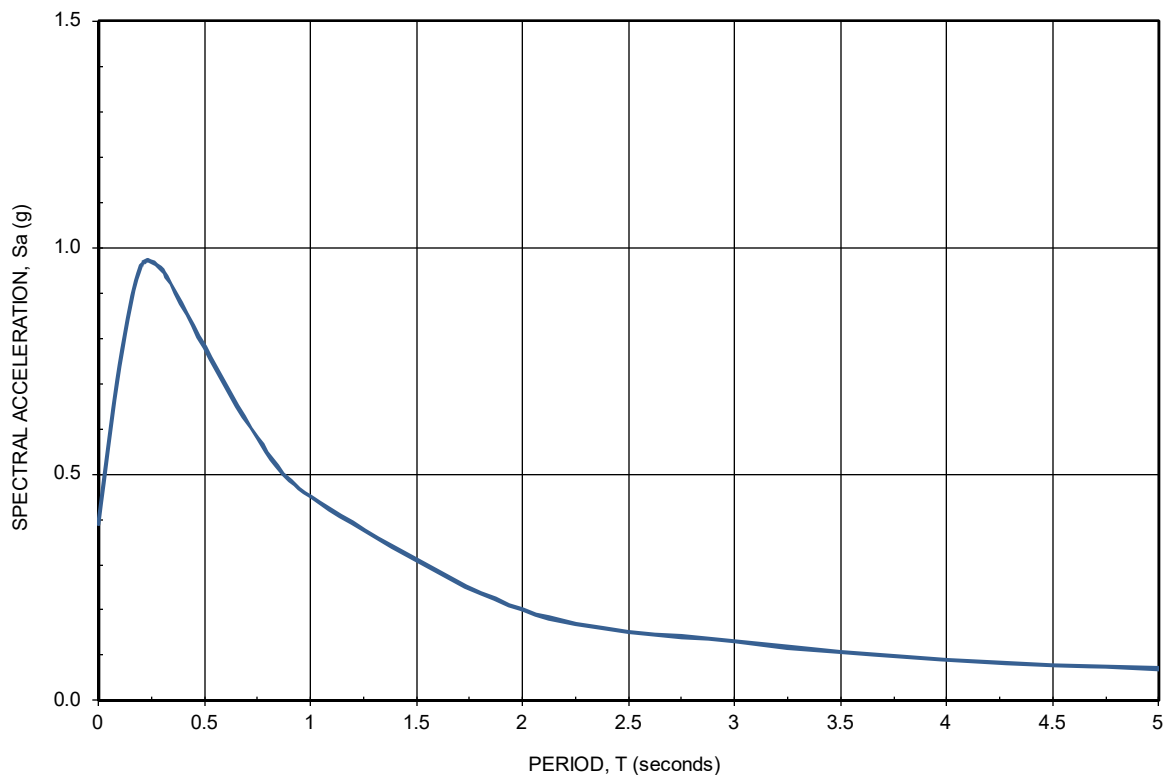


FIGURE 3

FAULT LOCATIONS

CADY MOUNTAIN WILDLIFE CROSSING
BRIGHTLINE WEST HIGH-SPEED RAILWAY PROJECT
CRONESE VALLEY, CALIFORNIA

PERIOD (seconds)	SPECTRAL ACCELERATION Sa (g)
0.00	0.39
0.10	0.74
0.20	0.96
0.30	0.95
0.50	0.78
0.75	0.58
1.00	0.45
2.00	0.20
3.00	0.13
4.00	0.09
5.00	0.07



NOTES:

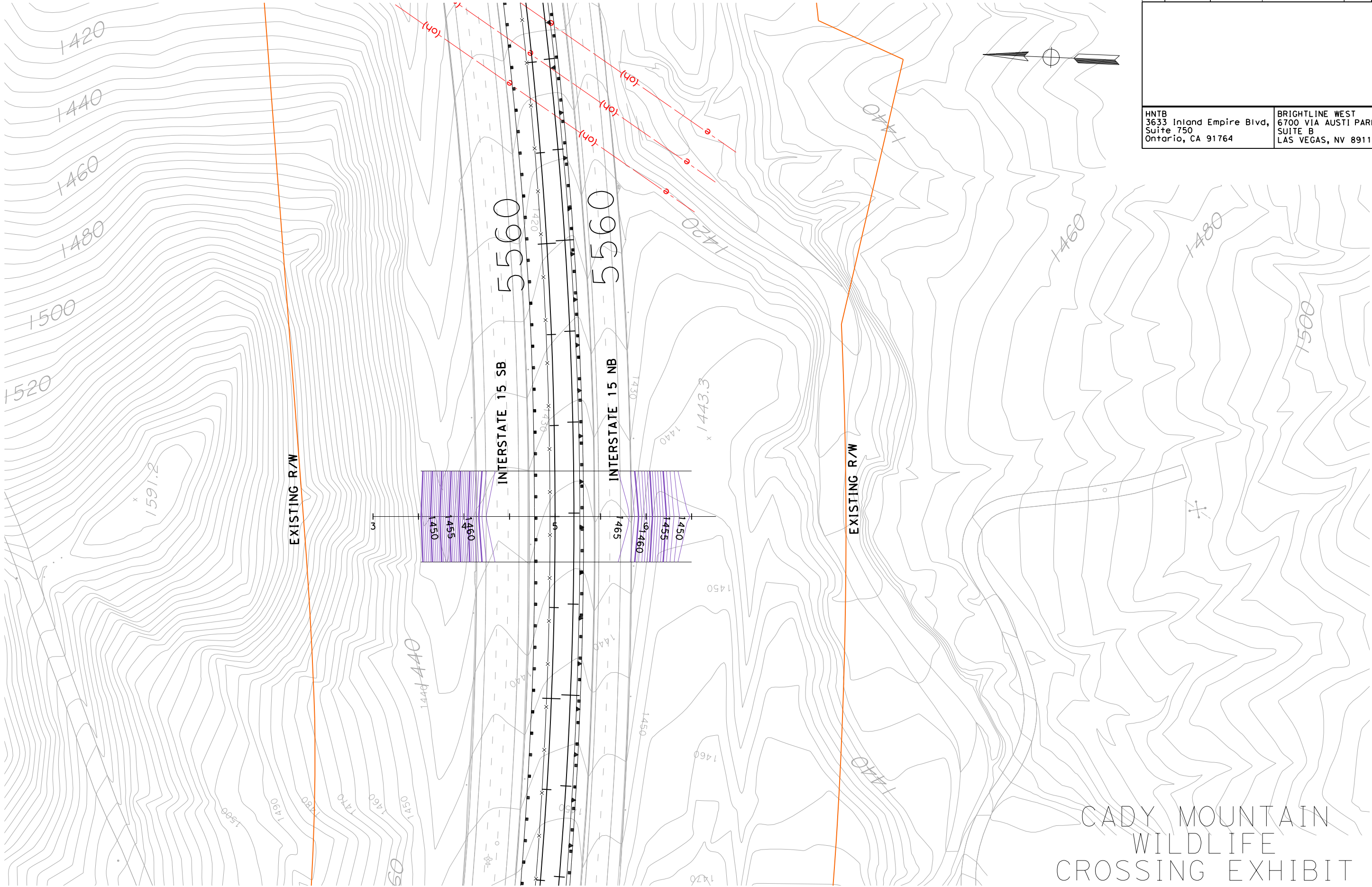
- 1 SITE LATITUDE = 35.08689 DEGREES
SITE LONGITUDE = -116.32721 DEGREES
- 2 AVERAGE SHEAR WAVE VELOCITY IN THE UPPER 30 METERS (ASSUMED) = 352 METERS/SECOND
- 3 THE ACCELERATION RESPONSE SPECTRUM REPRESENTS THE UNITED STATES GEOLOGICAL SURVEY 5% IN 50 YEARS HAZARD (2014) AT 5% DAMPING.
- 4 THE ACCELERATION RESPONSE SPECTRUM INCLUDES NEAR-FAULT EFFECTS AND BASIN AMPLIFICATION EFFECTS.
- 5 PEAK GROUND ACCELERATION (PGA) = 0.39g
- 6 MEAN MOMENT MAGNITUDE (M) = 6.45

FIGURE 4



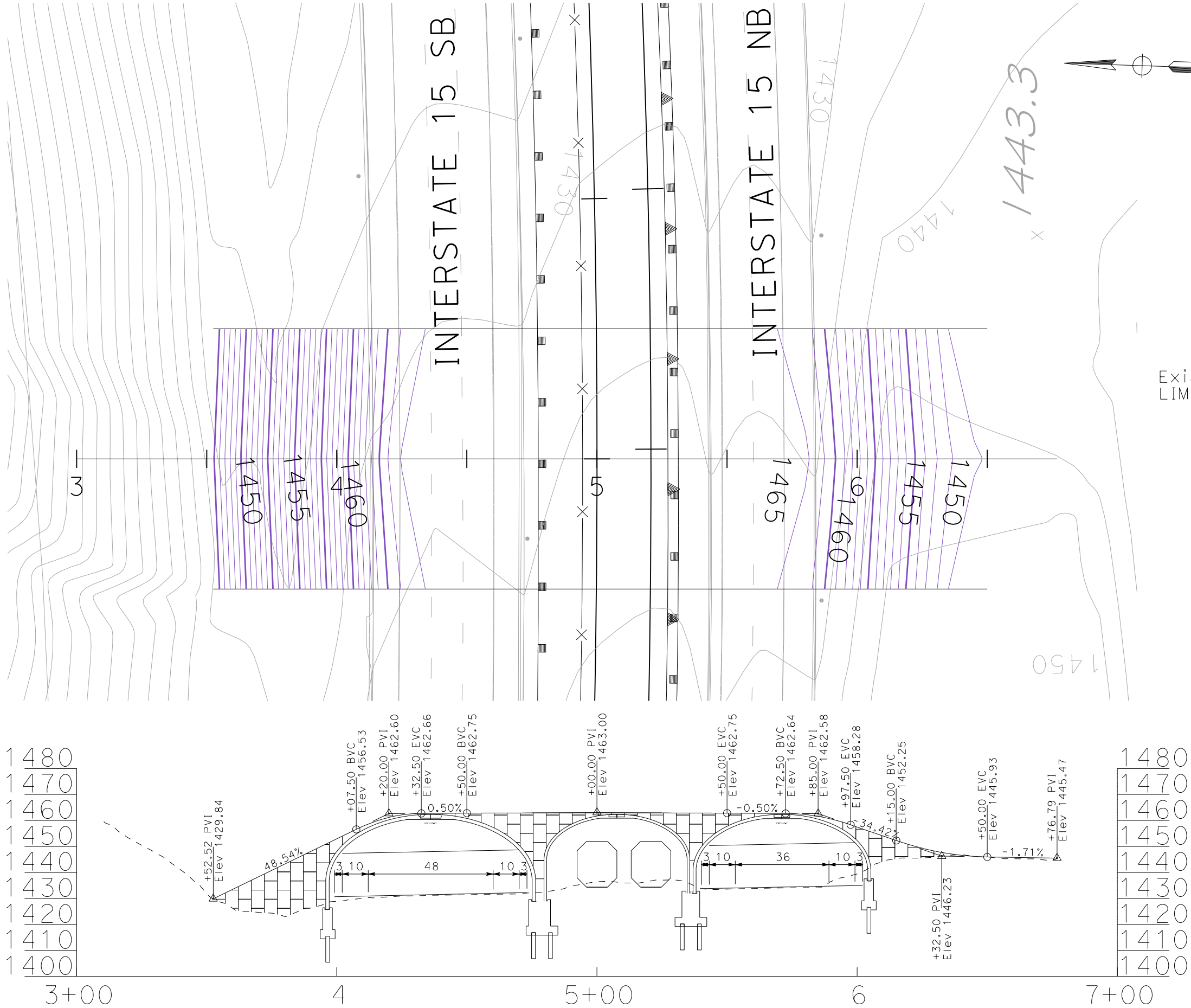
APPENDIX A

Conceptual Exhibits



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	51.83/186.1		
HNTB 3633 Inland Empire Blvd, Suite 750 Ontario, CA 91764			BRIGHTLINE WEST 6700 VIA AUSTI PARKWAY, SUITE B LAS VEGAS, NV 89119		

CADY MOUNTAIN
WILDLIFE
CROSSING EXHIBIT
PM 116.69

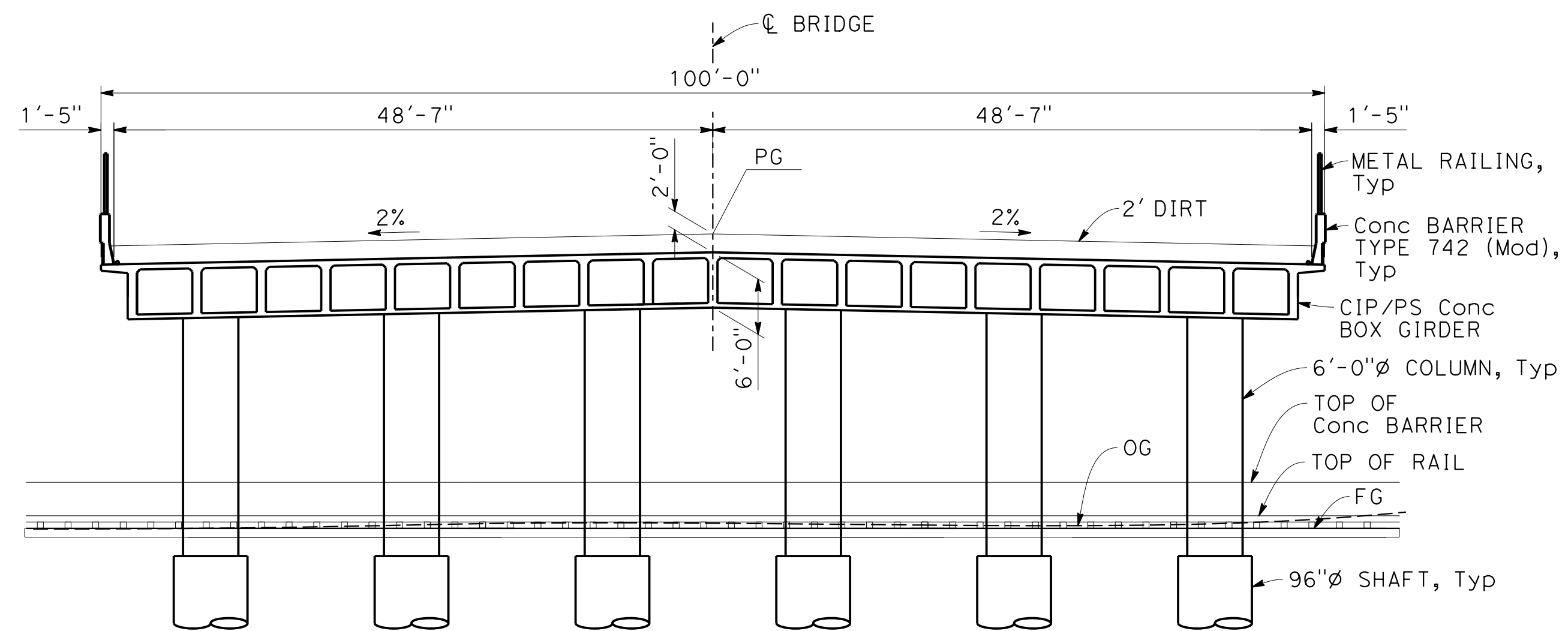
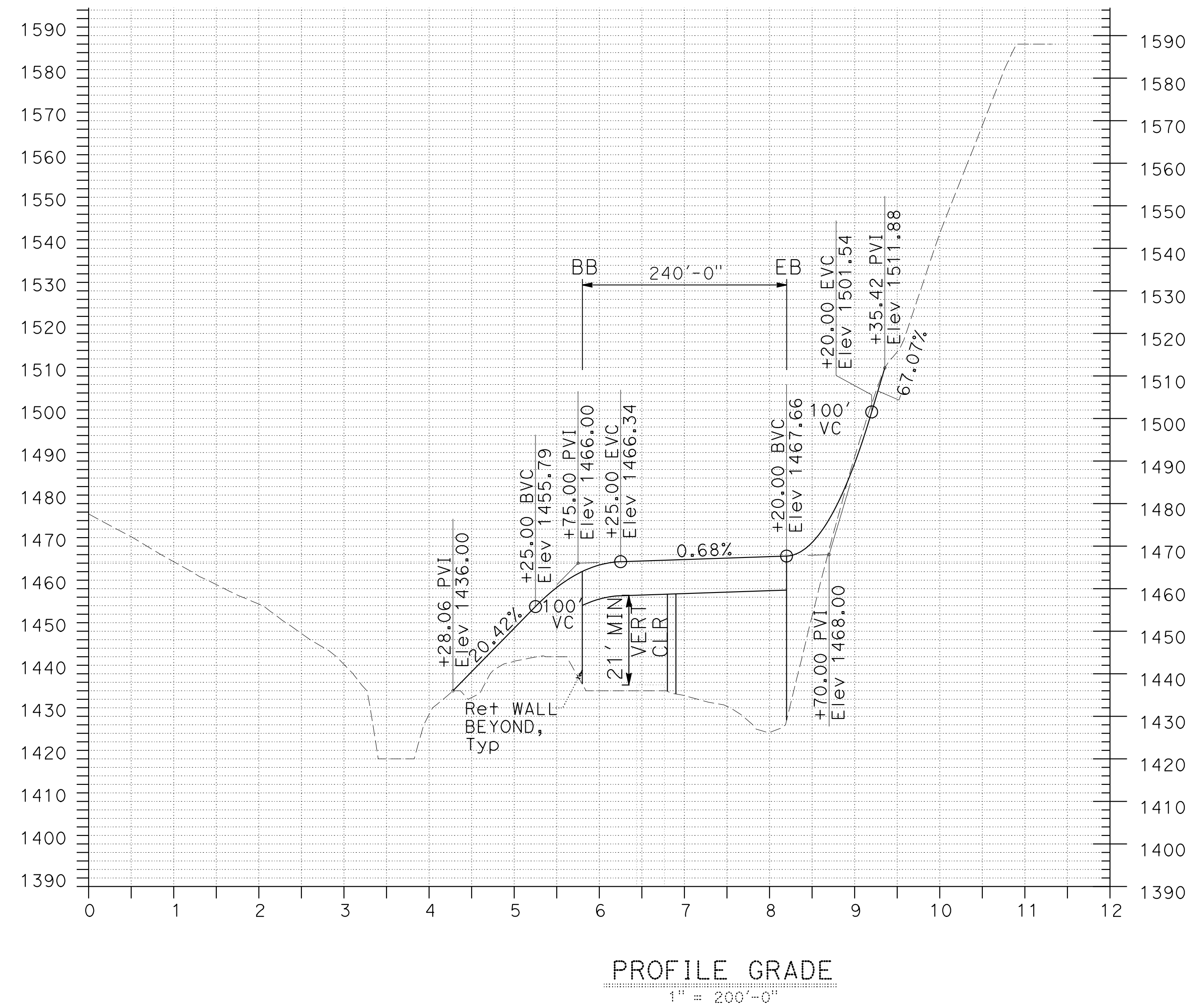


Exist R/W FALLS OUTSIDE OF LIMITS OF PLAN VIEW THIS SHEET.

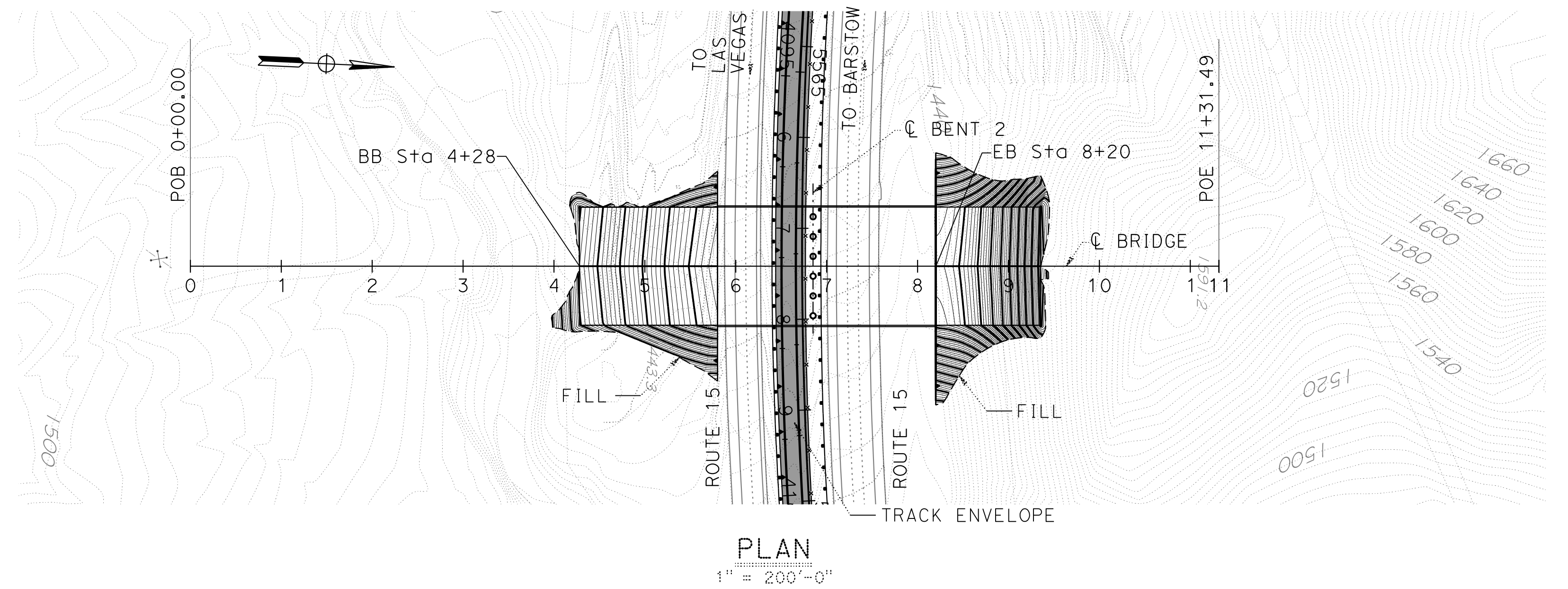
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	51.83/186.1		
HNTB 3633 Inland Empire Blvd, Suite 750 Ontario, CA 91764			BRIGHTLINE WEST 6700 VIA AUSTI PARKWAY, SUITE B LAS VEGAS, NV 89119		

CADY MOUNTAIN
WILDLIFE
CROSSING EXHIBIT
PM 116.69

DRAFT - CONCEPT DESIGN



TYPICAL SECTION



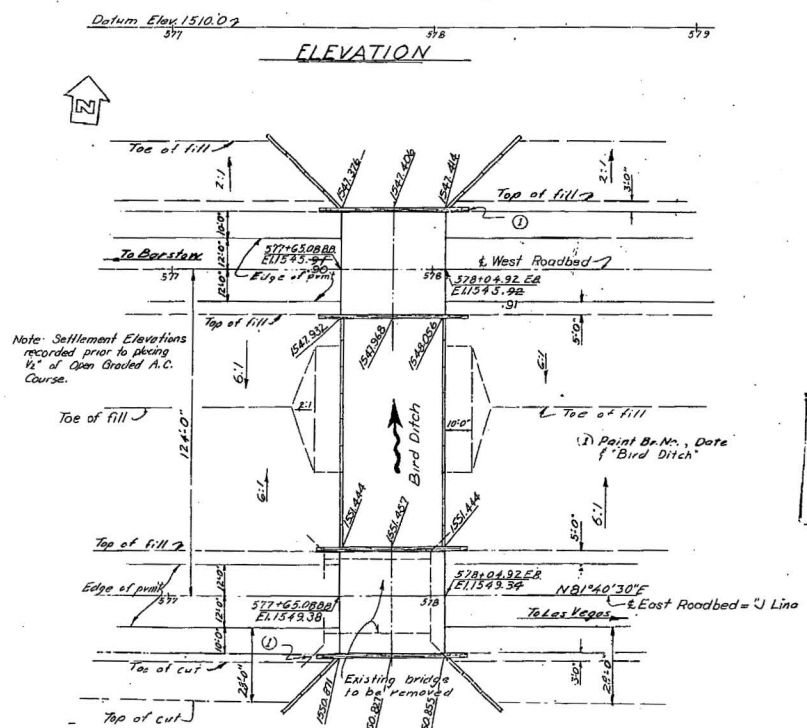
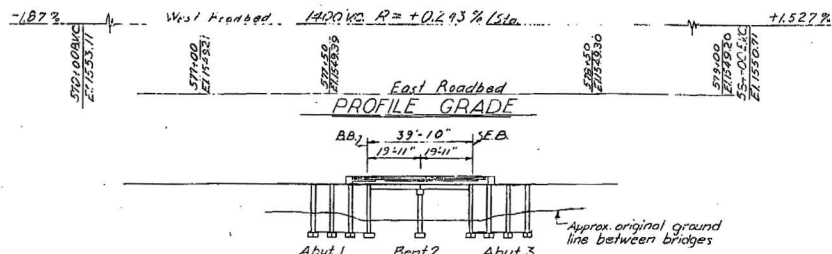
DESIGN OVERSIGHT	DESIGN	BY	CHECKED	SEISMIC ANALYSIS	BY	CHECKED		PROJECT ENGINEER	BRIDGE No.	CADY MOUNTAIN WILDLIFE CROSSING													
	DETAILS	BY	CHECKED	LAYOUT	BY	CHECKED			POST MILE														
	SIGN OFF DATE	QUANTITIES	BY X	CHECKED X	SPECIFICATIONS	BY X			PLANS AND SPECS COMPARED X			LOCATION NO. 3 PM R116.7											
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)				DATE PLOTTED => 12-APR-2023 TIME PLOTTED => 10:51 FILE => Animal_Crossing-EXHIBIT-3.dgn USERNAME => lzhang			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0	1	2	3	PROJECT NUMBER & PHASE:		COUNTY/ROUTE: CONTRACT No.:		DISREGARD PRINTS BEARING EARLIER REVISION DATES		REVISION DATES				SHEET	OF



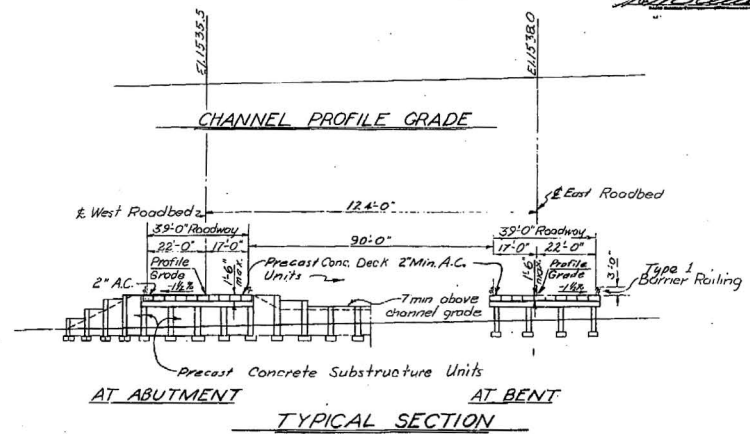
APPENDIX B

As-Built Plans (Bird Ditch Bridge)

DATE	BY	CHECKED	DATE
11/15/64	PM 1154		



Note: Settlement Elevations recorded prior to placing 6" of Open Graded A.C. Course.



APPROXIMATE QUANTITIES

REMOVING BRIDGE STRUCTURE EXCAVATION	LUMP SUM
STRUCTURE BACKFILL	712 C.Y.
"CLASS" A/C CONCRETE (BRIDGE)	800 C.Y.
"BAR REINFORCING STEEL (BRIDGE)	85 C.Y.
MISCELLANEOUS METAL (BRIDGE)	7,400 LBS.
BARRIER RAILING (TYPE 1)	8,300 LBS.
FURNISHING PRECAST CONCRETE DECK UNITS	244 L.F.
ERECTING PRECAST CONCRETE DECK UNITS	40 EA.
FURNISHING PC CONC. SUBSTRUCTURE UNITS	LUMP SUM
ERECTING PC CONCRETE SUBSTRUCTURE UNITS	LUMP SUM

AS BUILT PLANS
Contract No. 64-BV13C10
Date Completed
Document No. 60000-860

INDEX TO PLANS

- | SHEET NO. | TITLE |
|-----------|-------------------------|
| 1. | General Plan |
| 2. | Foundation Plan |
| 3. | Abutment Layout |
| 4. | Abutment Details No. 1 |
| 5. | Abutment Details No. 2 |
| 6. | Bents |
| 7. | Typical Section |
| 8. | Deck Plan |
| 9. | Deck Unit Details |
| 10. | Barrier Railing Sheet 1 |
| 11. | Barrier Railing Sheet 2 |

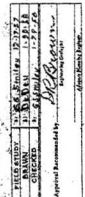
THIS SET OF PLANS HAS BEEN CORRECTED TO CORRESPOND TO THE "AS BUILT" PRINTS PLACED IN THE FIELD. AS DESCRIBED BY FIELD NOTES, ENDORSEMENTS, AND FIELD CHANGES. CHANGES COLLECTED IN FIELD NOTES, ENDORSEMENTS, AND FIELD CHANGES.

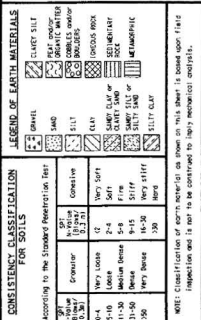
Notes: For "General Notes" see "Deck Unit Details" sheet.

Notes: For "Log of Test Borings" see "Telephone Wash Bridge" sheet.

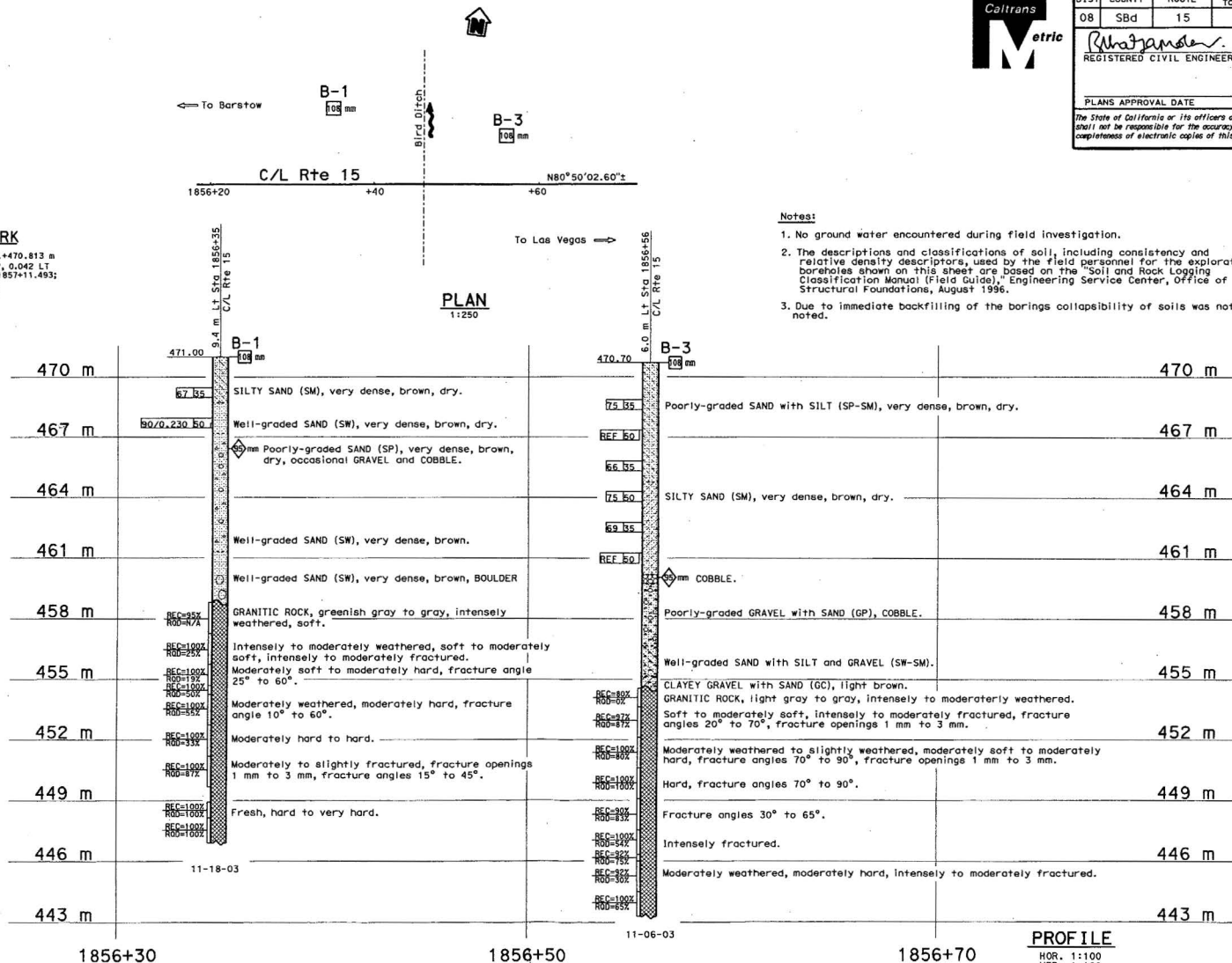
DESIGN SECTION Project Designer: <i>James D. [Signature]</i> Chief Designer: <i>[Signature]</i>		7 64-BV13C10 BIRD DITCH BRIDGE LOCATED BETWEEN FIELD & BAKER DR. RTE. 31 IN SAN BERNARDINO COUNTY GENERAL PLAN SCALE 1" = 20' BRIDGE 54-238 FILE DRAWING 6-5533-09
DESIGN: <i>[Signature]</i> DETAILS: <i>[Signature]</i> QUANTITIES: <i>[Signature]</i> SPECIFICATIONS: <i>[Signature]</i>		

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY SUPERVISION AND CONTROL ON 11/15/64 IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION OF THE DIRECTOR OF PUBLIC WORKS.
DATE 2-1-72 SIGNATURE *[Signature]* TITLE *[Title]*





BM Elev. +470.813 m
FND 0.064 BR CAP, 0.042 LT
C/L Rte 15 Sta 1857+11.493;
N= 677,238.278
E= 2,150,436.596



Notes:

1. No ground water encountered during field investigation.
2. The descriptions and classifications of soil, including consistency and relative density descriptors, used by the field personnel for the exploration borholes shown on this sheet are based on the "Soil and Rock Logging Classification Manual (1964, 1965)" by the Engineering Service Center, Office of Structural Foundations, August 1996.
3. Due to immediate backfilling of the borings collapsibility of soils was not noted.



DIST	COUNTY	ROUTE	KILOMETER TOTAL	POST PROJECT	SHEET NO.	TOTAL SHEETS
08	Sbd	15				

R. H. Anderson
 REGISTERED CIVIL ENGINEER

3-12-04

PLANS APPROVAL DATE _____

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER
 Mohan Bannala
 No. C63046
 Exp. 6-30-06
 CIVIL
 STATE OF CALIFORNIA

ENGINEERING SERVICES		GEOTECHNICAL SERVICES		FIELD INVESTIGATION BY:		STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION		DIVISION OF STRUCTURES STRUCTURE DESIGN		BRIDGE NO. 54-0238L		BIRD DITCH BRIDGE (WIDEN)					
DRAWN BY F. Nguyen 03/04										KILOMETER POST 185.5		LOG OF TEST BORINGS 1 OF 2					
CHECKED BY M. Bonala				M. Bonala													

ORIGINAL SCALE IN MILLIMETERS
FOR REDUCED PLANS

0 10 20 30 40 50 60 70 80 90 100

CU 08
EA 476101

DISREGARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES (PRELIMINARY STAGE ONLY)

3-18-04

SHEET 01 OF 01

SERNAME	W	T	G	D	DATE PLOTTED =>	TIME PLOTTED =>
					22-MAR-2004	11:40

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES
As-Built Log of Test Borings sheet is considered an informational document only.
As such, the State of California registration seal with signature, license number and registration certificate expiration date certifies that this is a true and accurate copy of the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	KILOMETER POST-TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	58d	15			

REGISTERED CIVIL ENGINEER
MAYOR BONILLA
No. 063048
Exp. 06-30-06
CIVIL
STATE OF CALIFORNIA

05/19/2004

BIRD DITCH BRIDGE (WIDEN)
LOG OF TEST BORINGS 2 OF 2

NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE INVESTIGATIONS, SACRAMENTO, CALIFORNIA

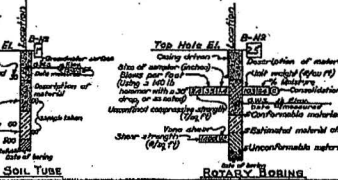
CU: 08
EAI 476101
BRIDGE NO.
54-0238L
SHEET 02

Boring	Station	Offset from "C/L Rte 15"
B-1	1856+45.97	11.4 m Left
B-2	1856+51.45	21.0 m Left
B-3	1856+38.35	14.8 m Right

NOTES:
1. See the General Plan and/or Foundation Plan for Metric Stations.
2. This data refers to approximate metric locations of the As-Built Log of Test Borings.
3. This table is presented for the convenience of any bidder, contractor or other interested party only.

No Ground Water Encountered

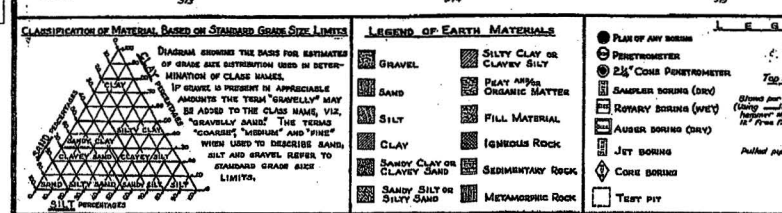
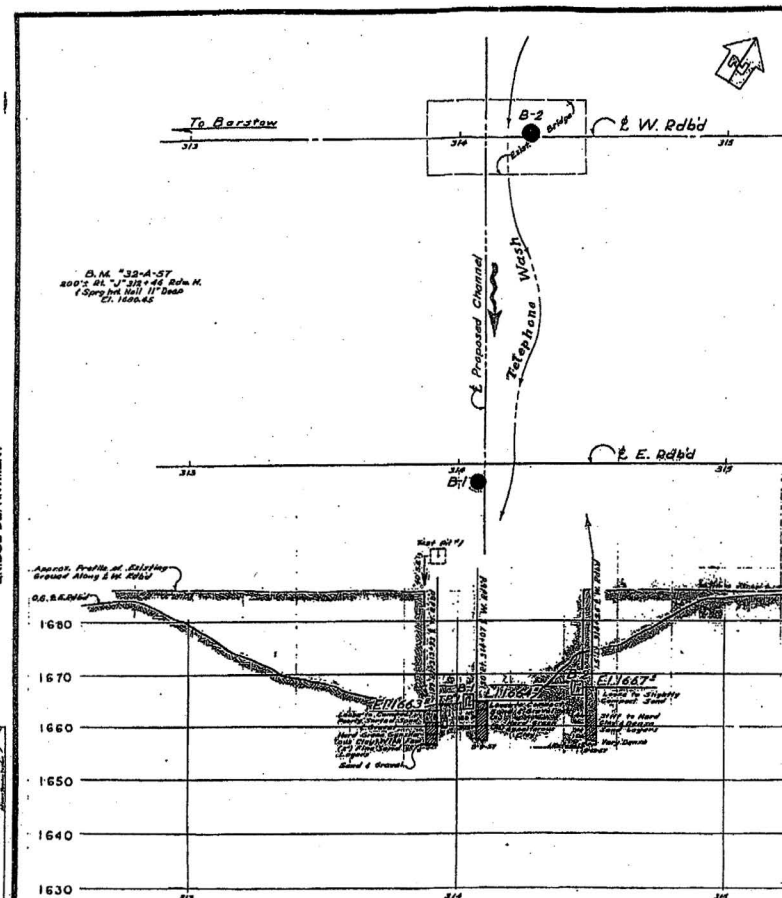
LEGEND OF BORING OPERATIONS



1" SOIL TUBE

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY SUPERVISION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF PUBLIC WORKS.

DATE 2-1-74 SIGNATURE [Signature] TITLE [Title]



CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

LEGEND OF EARTH MATERIALS

PLAN OF ANY BORING

SYMBOLS

NOTES

TELEPHONE WASH BRIDGE

BIRD DITCH BRIDGE

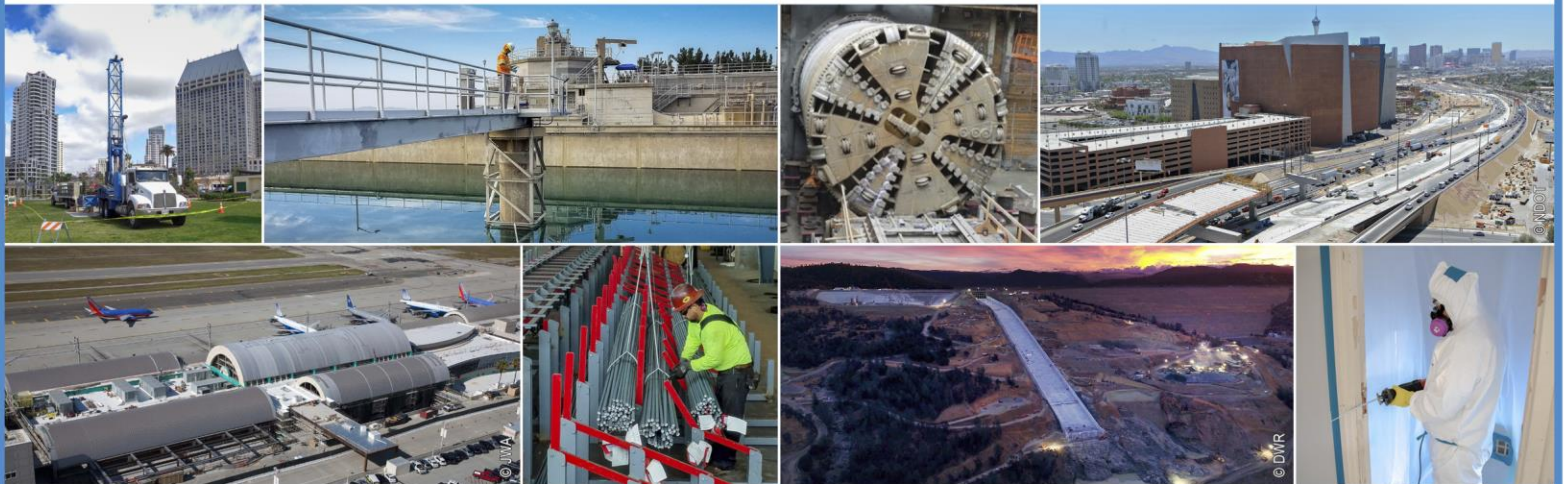
LOG OF TEST BORINGS

HORIZ 1620 54-233 P.A.

REMARKS: [Remarks]

FILE DRAWING NO. P. 5553

16



475 Goddard, Suite 200 | Irvine, California 92618 | p. 949.753.7070

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

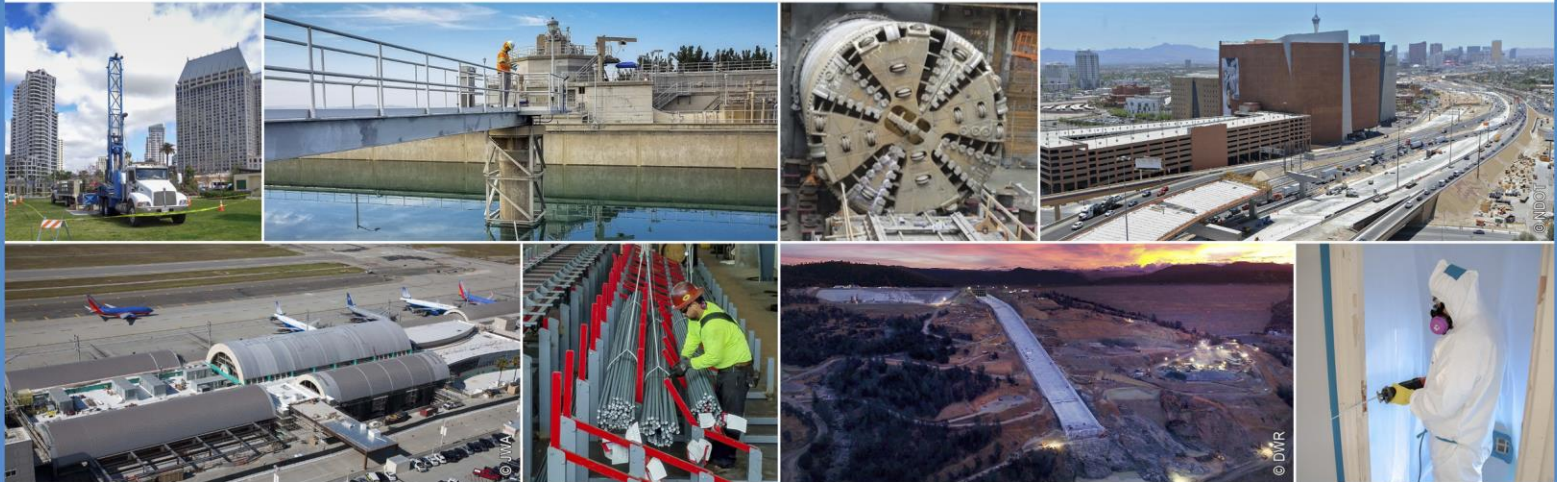
ninyoandmoore.com

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Structure Preliminary Geotechnical Report (SPGR)
Zzyzx Wildlife Crossing
Brightline West High-Speed Railway Project
Baker, California
08-SBd-15-PM 129.73

Brightline West
3920 West Hacienda Avenue | Las Vegas, Nevada 89118

April 17, 2023 | Project No. 211570003



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

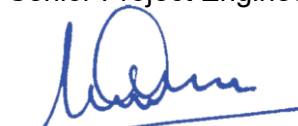
Structure Preliminary Geotechnical Report (SPGR)
Zzyzx Wildlife Crossing
Brightline West High-Speed Railway Project
Baker, California
08-SBd-15-PM 129.73

Mr. Adrian Share, PE
Brightline West
3920 West Hacienda Avenue | Las Vegas, Nevada 89118

April 17, 2023 | Project No. 211570003


Spencer Marcinek, PE, GE
Senior Project Engineer




Madan Chirumalla, PE, GE
Principal Engineer



SCM/MAC/RDH/mlc/scs


Ronald Hallum, PG, CEG
Principal Geologist



CONTENTS

1	INTRODUCTION	1
2	SCOPE OF SERVICES	1
3	PROJECT DESCRIPTION	1
4	GEOTECHNICAL INVESTIGATION	2
5	GEOTECHNICAL CONDITIONS	2
5.1	Surface Conditions	3
5.2	Regional Geologic Setting	3
5.3	Local Geologic Setting and Subsurface Conditions	3
5.4	Groundwater	4
6	AS-BUILT DATA	5
7	SCOUR DATA	5
8	CORROSIVITY	5
9	FAULTING AND SEISMICITY	6
9.1	Surface Fault Rupture	6
9.2	Ground Motion	6
9.3	Liquefaction Potential	7
9.4	Seismic Slope Stability	7
10	PRELIMINARY GEOTECHNICAL RECOMMENDATIONS	7
11	ADDITIONAL FIELD WORK AND LABORATORY TESTING	8
12	LIMITATIONS	9
13	REFERENCES	10

TABLE

1 – As-Built Information	5
--------------------------	---

FIGURES

1 – Site Location
2 – Regional Geology
3 – Fault Locations
4 – Acceleration Response Spectrum

APPENDICES

A – Conceptual Exhibits

B – As-Built Plans (Soda Road Overcrossing)

1 INTRODUCTION

In accordance with your request and authorization, we have prepared a Structure Preliminary Geotechnical Report (SPGR) for the Zzyzx Wildlife Crossing Project located approximately 6 miles southwest of Baker, California (Figure 1). The wildlife crossing is planned as part of the construction of the Brightline West High-Speed Railway Project. The project is currently in the preliminary design phase and the purpose of our study was to evaluate the soil, geologic, and groundwater conditions at the project site and to provide preliminary recommendations regarding the geotechnical aspects of the project based on our background review and site reconnaissance. Our SPGR was prepared in general accordance with the California Department of Transportation (Caltrans) guidelines. During subsequent design phases, we will prepare a Preliminary Foundation Report (PFR) and Foundation Report (FR) for the project. These reports will include subsurface evaluation, laboratory testing, geotechnical engineering analysis, and will present our updated conclusions and recommendations for design and construction of the project. We have previously submitted the SPGR dated March 29, 2023 for this project. Subsequent to our report, another bridge alternative conceptual exhibit was provided to us and also the bridge name was revised from Soda Mountain Wildlife Crossing to Zzyzx Wildlife Crossing. Our report is updated to include this bridge alternative and the revised bridge name.

2 SCOPE OF SERVICES

Our report was prepared in general accordance with Section 2, Structure Preliminary Geotechnical Report, from the Caltrans Guidelines for Foundation Reports for Bridges (Caltrans, 2021a). The scope of our geotechnical services included the following:

- Project coordination and consultation with the project team.
- Review of readily available background materials, including geologic and seismic hazard maps, published literature, stereoscopic aerial photographs, in-house information, existing plans, reports, and previous log of test borings for a nearby bridge.
- Performance of a geotechnical site reconnaissance to observe existing conditions at the location of the Zzyzx Wildlife Crossing.
- Data compilation and engineering analysis of the information obtained from our background review and site reconnaissance.
- Preparation of this SPGR in general accordance with Caltrans guidelines.

3 PROJECT DESCRIPTION

The proposed Zzyzx Wildlife Crossing is located approximately 6 miles southwest of Baker, California (Figure 1). The proposed bridge crosses over Interstate 15 (I-15) at Post Mile 129.73

(Appendix A). Zzyzx Road (previously Soda Road) is located approximately 0.4 mile east of the site. The Zzyzx Wildlife Crossing may consist of a three-vault (two for north-bound and south-bound I-15 traffic and one for the railroad alignment) bridge providing wildlife access between the north and south sides of the alignment. The structure may consist of structural backfill between mechanically stabilized earth walls. Another bridge alternative may consist of cast-in-place/prestressed (CIP/PS) concrete box girder supported on approximately 6 feet diameter columns. We anticipate that earthwork at the site will consist of construction of fill slopes, relatively minor cuts and fills to prepare the area for site drainage, foundation excavations, trenching and backfilling for new utilities, and grading for the new pavement and landscaping areas. The length of the wildlife crossing is proposed to be approximately 310 feet and the maximum height is anticipated to be approximately 32 feet (Appendix A). Conceptual exhibits of the wildlife crossing are presented in Appendix A. The CIP/PS bridge alternative conceptual exhibit shows a slightly different location (Post Mile and Station Numbers). Based on our discussions with the client, we understand that the CIP/PS bridge alternative conceptual exhibits were prepared in the past and will be revised to show the correct proposed bridge location (Post Mile 129.73) during the next phase.

4 GEOTECHNICAL INVESTIGATION

A California-certified engineering geologist from Ninyo & Moore visited the site on March 20, 2023. The surface and geologic conditions were observed and written and photographic documentation of the site were made.

Previous geotechnical investigation within the site vicinity includes a study performed by the State of California for the Soda Road Overcrossing (Bridge No. 54-398) located approximately 0.4 mile to the east. Two penetration borings were performed by the State of California on December 16, 1957, for the Soda Road Overcrossing to depths ranging from approximately 8 to 14 feet below the ground surface. The penetration rate in seconds per foot using a No. 2 McKiernan-Terry air hammer at 115 pounds per square inch was measured in the borings. The penetration rates measured at the termination depths in borings B-1 and B-2 were 300 and 181 seconds per foot, respectively. The Log of Test Boring (LOTB) sheet is presented in Appendix B.

5 GEOTECHNICAL CONDITIONS

The following sections describe the surface, geologic, soil, and groundwater conditions at the site.

5.1 Surface Conditions

The site is located within a valley along the I-15 corridor between a northerly ascending slope to the north and a southerly ascending slope to the south. The terrain along I-15 at the site is relatively flat and gently slopes down towards the northeast. Ground elevations within the wildlife crossing area range from approximately 1,243 feet above Mean Sea Level (MSL) on the north side of I-15 to approximately 1,252 feet above MSL on the north side of the center median of I-15 (HNTB, 2023). Loose rocks were observed on the adjacent hillsides of the wildlife crossing indicating a potential hazard for rockfalls during storms and earthquakes. The site latitude and longitude are approximately 35.19485 degrees north and 116.14858 degrees west, respectively (Google Earth, 2023).

One approximate drainage area is shown on the conceptual plan on the south side of I-15 (Brightline West, 2023). Drainage is generally by sheet flow to existing storm drain catch basins within the center median of I-15.

5.2 Regional Geologic Setting

The proposed wildlife crossing is located within the Mojave Desert Geomorphic Province of California and is characterized by mountain ranges and hills of moderate relief that are partially buried and separated by broad alluviated basins. The valleys in the Mojave Desert province are proportionally broader and mountains are more widely spaced and the mountains generally do not stand as high above their surroundings as in the neighboring Basin and Range province and Transverse Ranges province (Norris and Webb, 1990).

The mountain ranges and hills within the Mojave Desert province are comprised primarily of Mesozoic era (65 to 245 million years old) granitic and volcanic rocks and Paleozoic era (245 to 570 million years old) metamorphic rocks. These rocks generally include Mesozoic era granite, quartz monzonite, and porphyritic volcanic rocks and Paleozoic era gneiss and limestone. Some Tertiary age (2 to 65 million years old) surface exposures of non-marine volcanic and sedimentary rocks are mapped east of Barstow, in the Soda Mountains and in the Jean Hills area. Valleys, drainage areas, and alluvial fans along the flanks of mountains and valleys are underlain at depth by the basement rocks described above but have been filled by Quaternary age (last 2 million years) stream and lake deposits, alluvial fan deposits, and other alluvial sediments.

5.3 Local Geologic Setting and Subsurface Conditions

Published geologic maps indicate that the near-surface earth materials underlying the proposed wildlife crossing consist primarily of Felsic Plutonic Rocks (Miller, Menges, and Lidke, 2014). A regional geologic map for the site vicinity is shown on Figure 2. Based on our site reconnaissance,

the rock in the area consisted of moderately to highly weathered quartz monzonite to granite. Early Holocene-age and late Pleistocene-age young alluvial fan deposits are also mapped to the north, east, and west of the wildlife crossing along I-15. The Holocene-age alluvial deposits typically consist of relatively young, poorly consolidated or unconsolidated silt, sand, and gravel and the Pleistocene-age alluvial deposits generally consist of gravel, sand, silt, and clay that is moderately to well consolidated and often slightly cemented. Shallow alluvium and artificial fill soils associated with the prior roadway construction and utility trench backfill should be anticipated at the location of the wildlife crossing.

Additionally, a description of the geology for the nearby Soda Road Overcrossing (now Zzyzx Road) was presented in a foundation letter prepared by G.S. Smiley (1958). Soda Road Overcrossing is located in an area of Miocene-Pliocene terrestrial sediments that consist of slightly cemented sandstone and conglomerate. The bedrock is exposed on the north side of the bridge and approximately 10 feet of granular alluvium is present above the bedrock on the south side of the bridge. This corresponds with published geologic maps indicating that the nearby Soda Road Overcrossing is underlain by Partly Consolidated Materials on the north and alluvial fan deposits to the south (Miller, Menges, and Lidke, 2014). Based on our review of the LOTB sheet from the previous geotechnical evaluation for Soda Road Overcrossing, it is our opinion that the depth to dense bedrock corresponds to the relatively high penetration rates measured in borings B-1 and B-2 at termination depths of approximately 8 and 14 feet, respectively.

In addition to the bedrock and alluvial soils, artificial fills associated with the construction of I-15 were also observed at the proposed wildlife crossing site. These materials were observed to be up to roughly 10 feet in depth and consist of poorly consolidated sandy cobble gravel and gravelly sands.

5.4 Groundwater

Groundwater was not encountered in the exploratory borings during the previous subsurface exploration in 1957 for Soda Road Overcrossing to the depth explored of up to approximately 14 feet below the ground surface. Groundwater monitoring data from the State of California Department of Water Resources (2023) indicates groundwater depth fluctuations from 25 to 76 feet below the ground surface between 1965 and 1984 based on information from six monitoring wells located within an approximately ten-mile radius from the site (along I-15 from Cronise Valley to the south to Baker to the north). It should be noted that the ground surface elevations in Cronise Valley and Baker are on the order of 150 to 300 feet lower than the ground surface elevation of the wildlife crossing, respectively. Groundwater levels are subject to variation due to seasonal rainfall, irrigation, groundwater pumping, subsurface stratigraphy, topography, and other

conditions. The groundwater depths at the site should be further evaluated during a subsequent design phase.

6 AS-BUILT DATA

The as-built data of the nearby Soda Road Overcrossing, Bridge No. 54-398 (now Zzyzx Road), is discussed in this section. The as-built plans (State of California, 1963a and b) indicate that the nearby Soda Road Overcrossing is a four-span, cast-in-place concrete slab bridge supported on spread footings. There are two abutments (Abutments 1 and 5) and three bents (Bents 2 through 4). Detailed foundation recommendations, including allowable bearing pressures, were presented in a letter prepared by G.S. Smiley (1958). This letter also implies that the Abutment 5 allowable footing pressure is based on the footing supported on compacted fill. The as-built footing bottom elevations and design loads for the bridge are presented in Table 1 below. The as-built plans are presented in Appendix B.

Table 1 – As-Built Information			
Location	As-Built Bottom of Footing Elevation (feet)	As-Built Allowable Footing Pressure (tsf)	As-Built Design Footing Pressure (tsf)
Abutment 1	1,192.0	4.0	4.0
Bent 2	1,174.7	4.0	4.0
Bent 3	1,170.0	4.0	4.0
Bent 4	1,167.0	3.0	3.0
Abutment 5	1,188.5	2.0	2.0
Notes: tsf – tons per square foot			

7 SCOUR DATA

Due to the presence of a storm drain catch basin within the center median of I-15 and a drainage channel located along the south side of I-15 (Brightline West, 2023), the proposed wildlife crossing extends across known water courses. The near-surface artificial fill and alluvium are considered potentially scourable. Since the site extends over known water courses and since the hydrology/hydraulic details were not available for our review at the time of this evaluation, we recommend that scour depth be evaluated by the civil engineer during a subsequent design phase. We anticipate that the proposed improvements will handle much of the surface runoff during periods of precipitation.

8 CORROSIVITY

There was no historical corrosion data at the site available for our review at the time of our evaluation. During our previous geotechnical evaluation for the North Segment of the Brightline West High-Speed Railway Project (Ninyo & Moore, 2022), we performed 74 corrosivity laboratory

tests (pH, electrical resistivity, water-soluble chloride content, and water-soluble sulfate content) on near-surface samples from borings spaced between Barstow, California, and the California-Nevada state line. Based on the laboratory test results and Caltrans corrosion criteria (2021d), 28 out of 74 of the samples can be classified as a corrosive. For preliminary design purposes, the site may be considered as corrosive. The on-site materials should be tested for corrosive properties during the subsequent design phase.

9 FAULTING AND SEISMICITY

The site is in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant during the design life of the proposed project. Figure 3 shows the approximate site location relative to the major faults in the region. The site is not located within a State of California Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone) (Hart and Bryant, 2018). The nearest mapped active fault to the site is the Baker fault located approximately 2½ miles northeast of the site (United States Geological Survey [USGS], 2023a).

In general, seismic hazards that could impact the project include ground surface rupture, strong ground motion, liquefaction, and seismic slope instability that are discussed in the following sections.

9.1 Surface Fault Rupture

Based on our review of the referenced literature, no active faults are known to cross the project site. Therefore, the probability of damage from surface ground rupture is considered to be low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

9.2 Ground Motion

Considering the proximity of the site to active faults capable of producing a maximum magnitude ($M_{\max}$) of 6.0 or more, the project area has a high potential for experiencing strong ground motion. Version 3.02 of the Caltrans Acceleration Response Spectra (ARS) online tool (Caltrans, 2023) was used to calculate the design seismic event with respect to the proposed improvements. The design ARS represents the United States Geological Survey (USGS, 2014) 5 percent in 50 years hazard at 5 percent damping and includes near-fault effects and basin amplification effects.

The input parameters for the Caltrans ARS online tool consist of the site latitude, site longitude, and average shear wave velocity (V_s) in the upper 100 feet (i.e., 30 meters) (V_{s30}). Based on our review of California Geological Survey's (CGS) shear wave velocity map, the V_{s30} is estimated to

be approximately 2,329 feet per second (710 meters per second) (CGS, 2015). This shear wave velocity is representative of a site mapped on weathered granitic bedrock. The preliminary design ARS curve evaluated for the site is presented on Figure 4. The calculated peak ground acceleration (PGA) is 0.23g and the mean moment magnitude is 6.46. The V_{S30} should be evaluated during a subsequent design phase and the design ARS curve and PGA should be updated accordingly, as applicable.

9.3 Liquefaction Potential

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

According to San Bernardino County Land Use Plan (2007), the project site is not located in an area mapped as being susceptible to liquefaction. Groundwater was not encountered in the previous borings at the nearby Soda Road Overcrossing to a termination depth of 14 feet. Due to the presence of shallow granitic bedrock, it is our opinion that liquefaction and liquefaction-related seismic hazards (e.g., dynamic settlement, ground subsidence, and/or lateral spreading) are not design considerations for the project.

9.4 Seismic Slope Stability

Based on the conceptual exhibits (Appendix A), significant grading of the hillside slopes is not planned for the project. Minor grading may consist of benching of the slopes to place compacted fill for the bridge approach embankments. On a preliminary basis, seismic slope stability is not anticipated to be a design consideration for the project. However, the project is currently in conceptual design and the structure details may be subject to change. Seismic slope stability should be further evaluated during the design phase when detailed plans are available.

10 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

The purpose of this SPGR was to perform a preliminary evaluation of the soil, geologic, and groundwater conditions in the area of the proposed improvements for general planning purposes. Based on our preliminary evaluation, it is our opinion that the project is feasible from a

geotechnical perspective. A detailed geotechnical evaluation will be performed during a subsequent design phase, including the PFR and FR, to develop appropriate design and construction recommendations for the project.

We anticipate that, from a geotechnical perspective, the wildlife crossing may be supported on shallow foundations. Remedial grading consisting of removing fill and alluvium to expose firm and unyielding bedrock should be anticipated during construction. The depth of fill, potential presence of underground utilities or other improvements, and the depth and lateral extent of excavations for foundation construction can potentially impact the feasibility of shallow foundations. The feasibility of shallow foundations should be further evaluated during the subsequent design phase. Settlement calculations for the shallow foundations should also be performed during a subsequent design phase, as applicable.

Deep foundations may also be utilized for the bridge. If deep foundations are used for the project, we would recommend cast-in-drilled-hole (CIDH) piles. However, due to the potential for difficult drilled excavations into cohesionless fill and alluvial soils and dense bedrock necessary to construct CIDH piles, shallow foundations are the preferred alternative from a geotechnical perspective. Driven piles are not recommended due to the presence of shallow bedrock and the potential for difficult driving conditions or driving refusal at shallow depths.

In general, the proposed wildlife crossing design should be prepared in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Bridge Design Specifications (2020), the Caltrans California Amendments to the AASHTO LRFD Bridge Design Specifications (2019d), and other applicable Caltrans design manuals.

11 ADDITIONAL FIELD WORK AND LABORATORY TESTING

The available subsurface information does not provide sufficient data to complete the design recommendations for Zzyzx Wildlife Crossing. This geotechnical report was performed for preliminary planning purposes. The project is currently in conceptual design and the structure details may be subject to change. During a subsequent design phase, Ninyo & Moore will perform additional geotechnical evaluations. The additional geotechnical evaluations would consist of obtaining the excavation and boring permits, subsurface exploration, geotechnical laboratory testing, and engineering analysis. Due to the presence of shallow bedrock, pushing cone penetration test soundings to target depths may not be successful. Borings are anticipated to extend to a depth of 20 feet below the proposed foundation bottoms or up to approximately 60 feet below the ground surface or refusal. We anticipate that the subsurface exploration will be

performed in the center median and shoulders of I-15. Geotechnical laboratory testing is anticipated to consist of moisture content and dry density, grain size (sieve) analysis, expansion index, direct shear, and corrosivity, as applicable. The design of project improvements should be based on the subsequent geotechnical evaluation results and recommendations.

12 LIMITATIONS

This report is based on review of data collected by others. No subsurface exploration or laboratory testing at the site was performed by Ninyo & Moore. Our findings are based, in part, on the veracity of the data prepared by others. The geotechnical evaluation presented in this report has been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every surface and/or subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended exclusively for use by the client and for preliminary design. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

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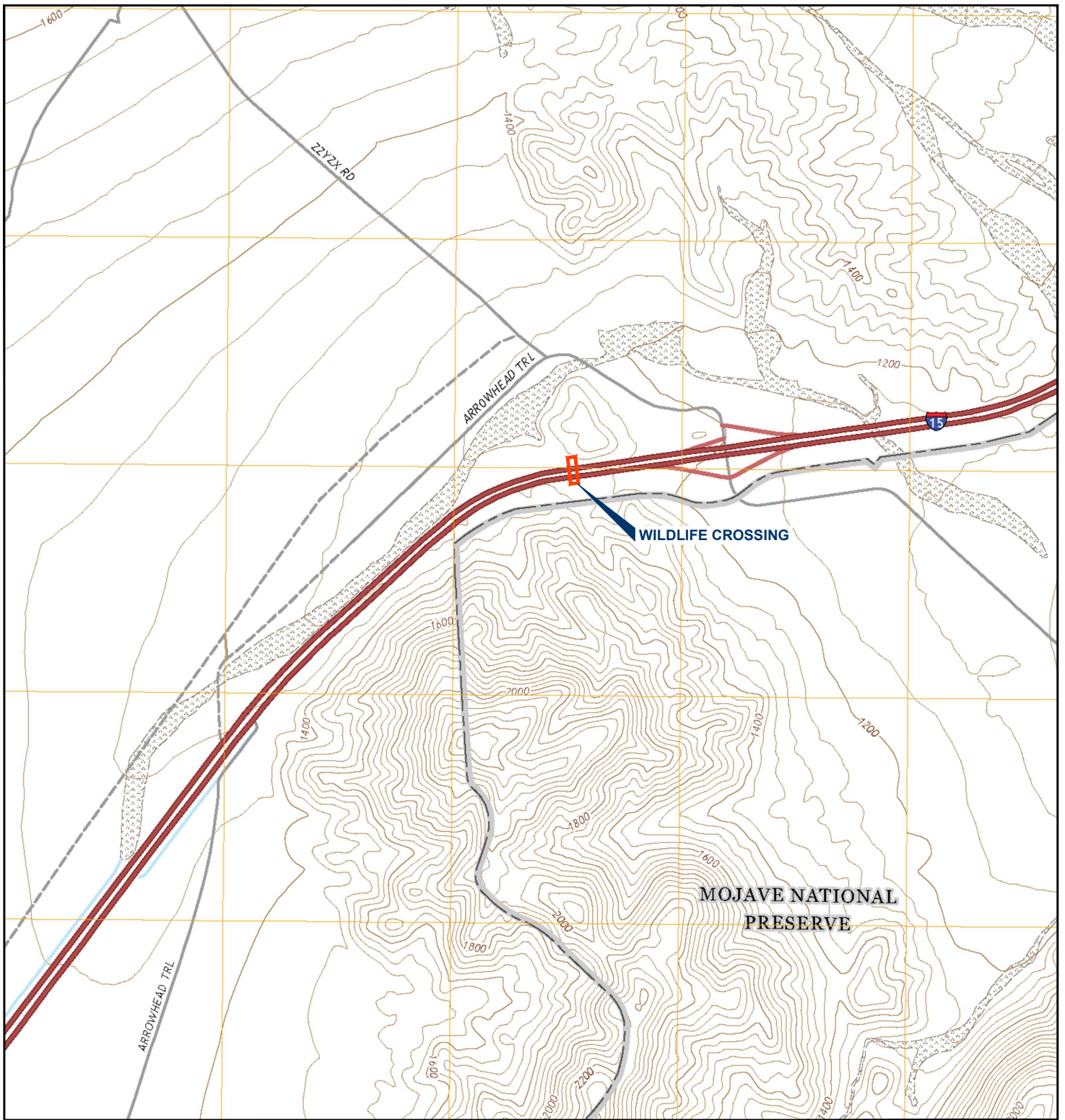
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FIGURES

211570003_SL.dwg (SODA) 03/29/2023 JDP



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: USGS, 2018.

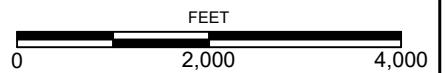
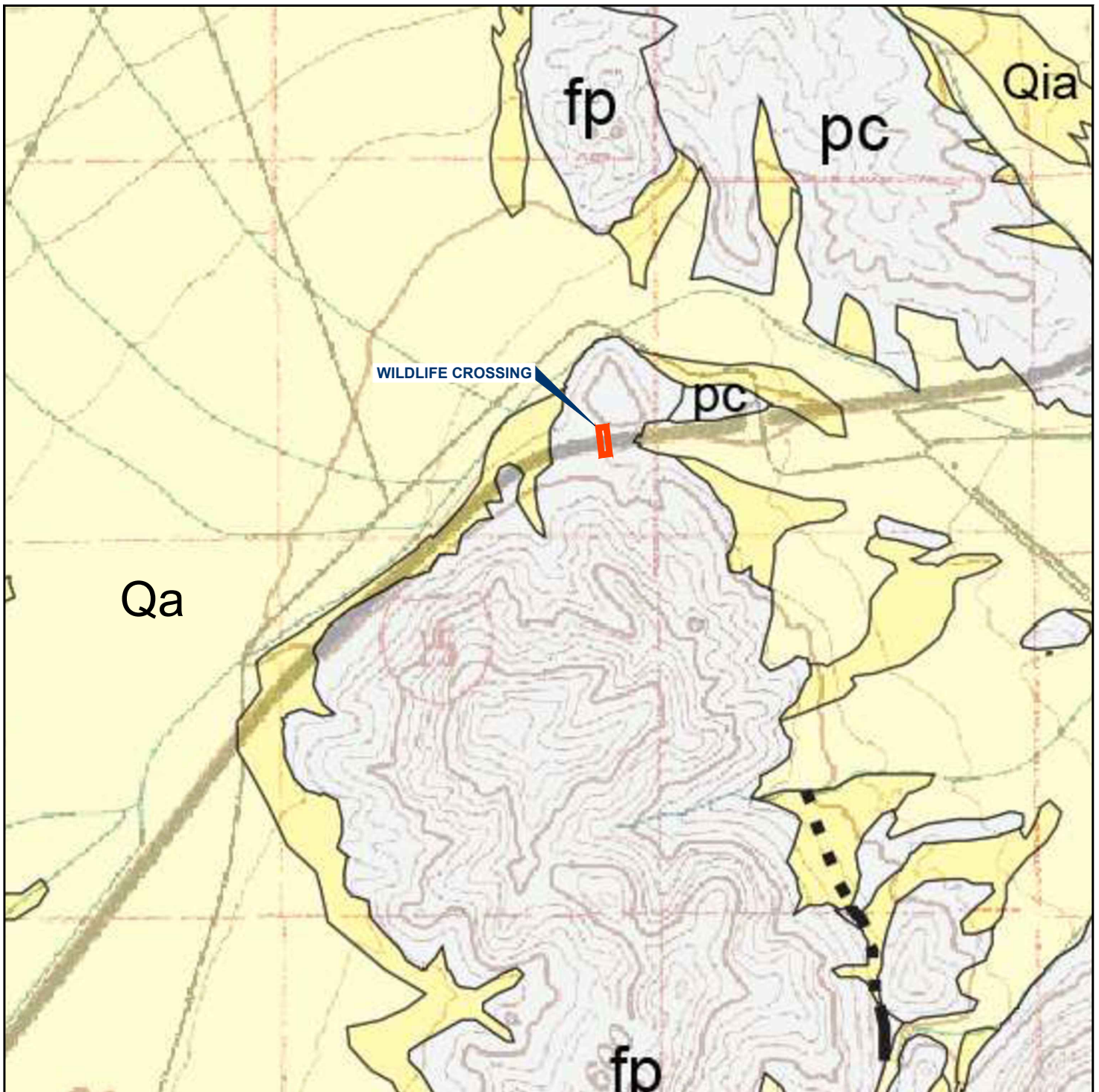


FIGURE 1



LEGEND

	Qa	ALLUVIAL FAN DEPOSITS		WILDLIFE CROSSING
	fp	FELSIC PLUTONIC ROCKS		GEOLOGIC CONTACT
	pc	PARTLY CONSOLIDATED MATERIALS		FAULT; DASHED WHERE INFERRED, DOTTED WHERE CONCEALED

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: MILLER, MENGES, AND LIDKE, 2014.

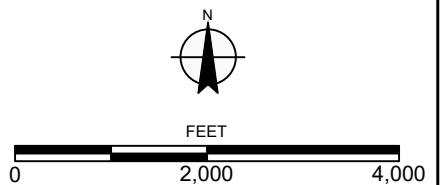
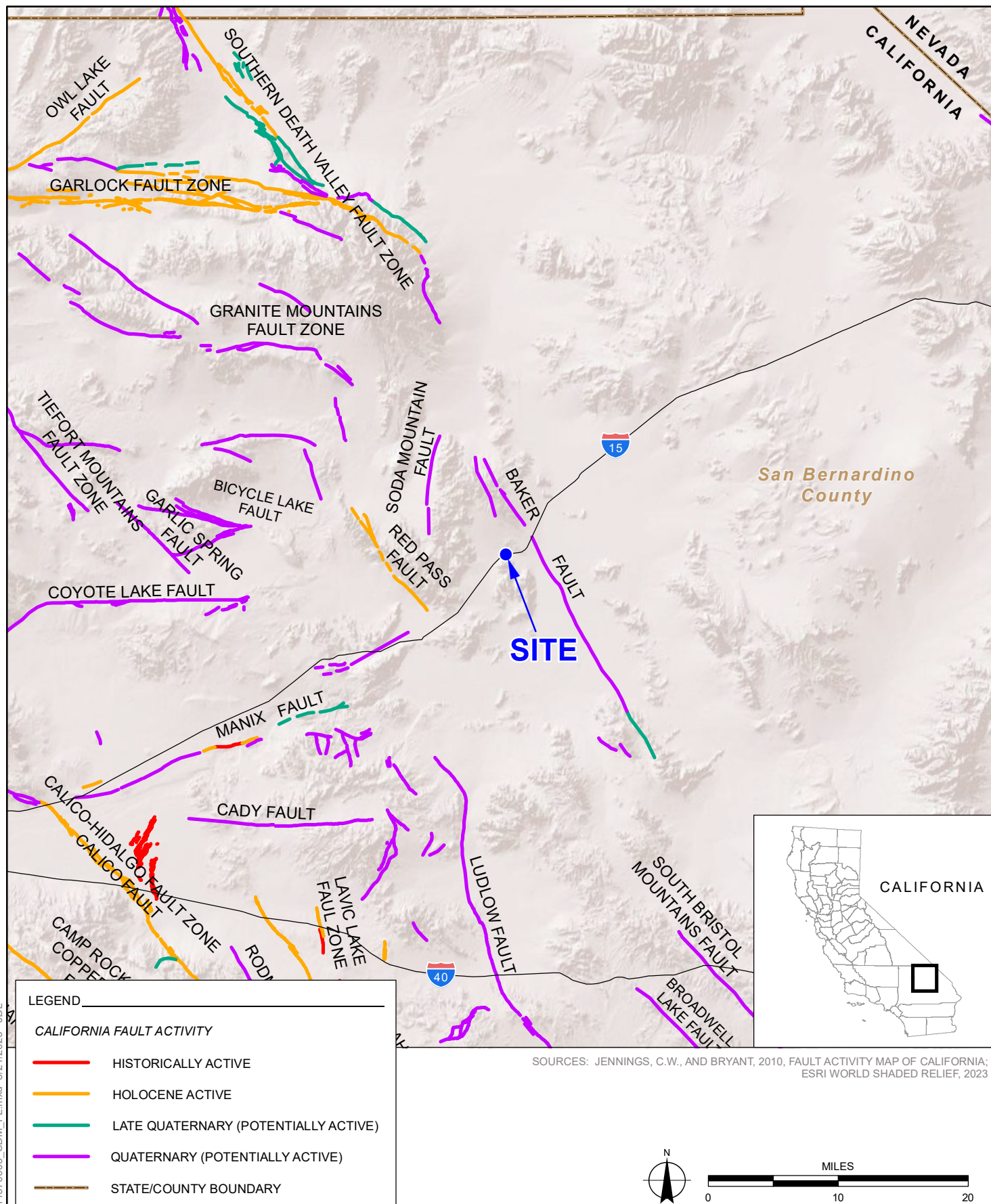
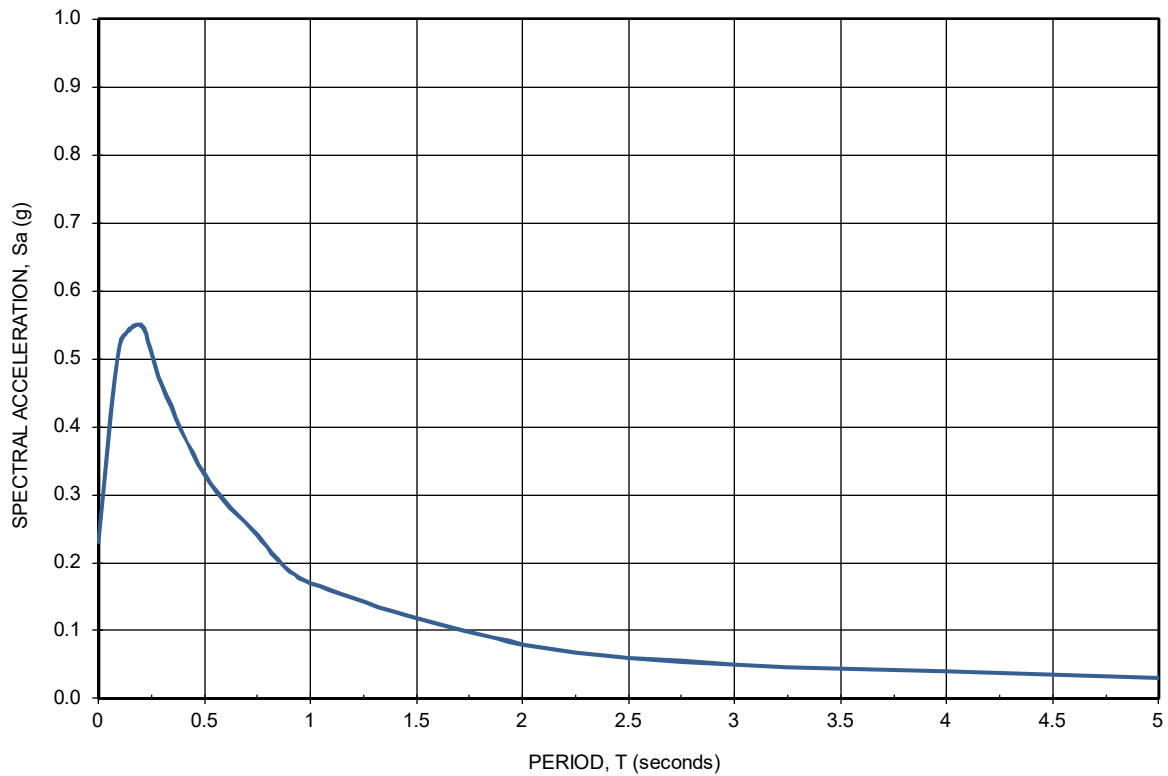


FIGURE 2

211570003_SDM_FL.mxd 3/21/2023 JDL



PERIOD (seconds)	SPECTRAL ACCELERATION Sa (g)
0.00	0.23
0.10	0.52
0.20	0.55
0.30	0.46
0.50	0.33
0.75	0.24
1.00	0.17
2.00	0.08
3.00	0.05
4.00	0.04
5.00	0.03



NOTES:

- 1 SITE LATITUDE = 35.19485 DEGREES
SITE LONGITUDE = -116.14858 DEGREES
- 2 AVERAGE SHEAR WAVE VELOCITY IN THE UPPER 30 METERS (ASSUMED) = 710 METERS/SECOND
- 3 THE ACCELERATION RESPONSE SPECTRUM REPRESENTS THE UNITED STATES GEOLOGICAL SURVEY 5% IN 50 YEARS HAZARD (2014) AT 5% DAMPING.
- 4 THE ACCELERATION RESPONSE SPECTRUM INCLUDES NEAR-FAULT EFFECTS AND BASIN AMPLIFICATION EFFECTS.
- 5 PEAK GROUND ACCELERATION (PGA) = 0.23g
- 6 MEAN MOMENT MAGNITUDE (M) = 6.46

FIGURE 4

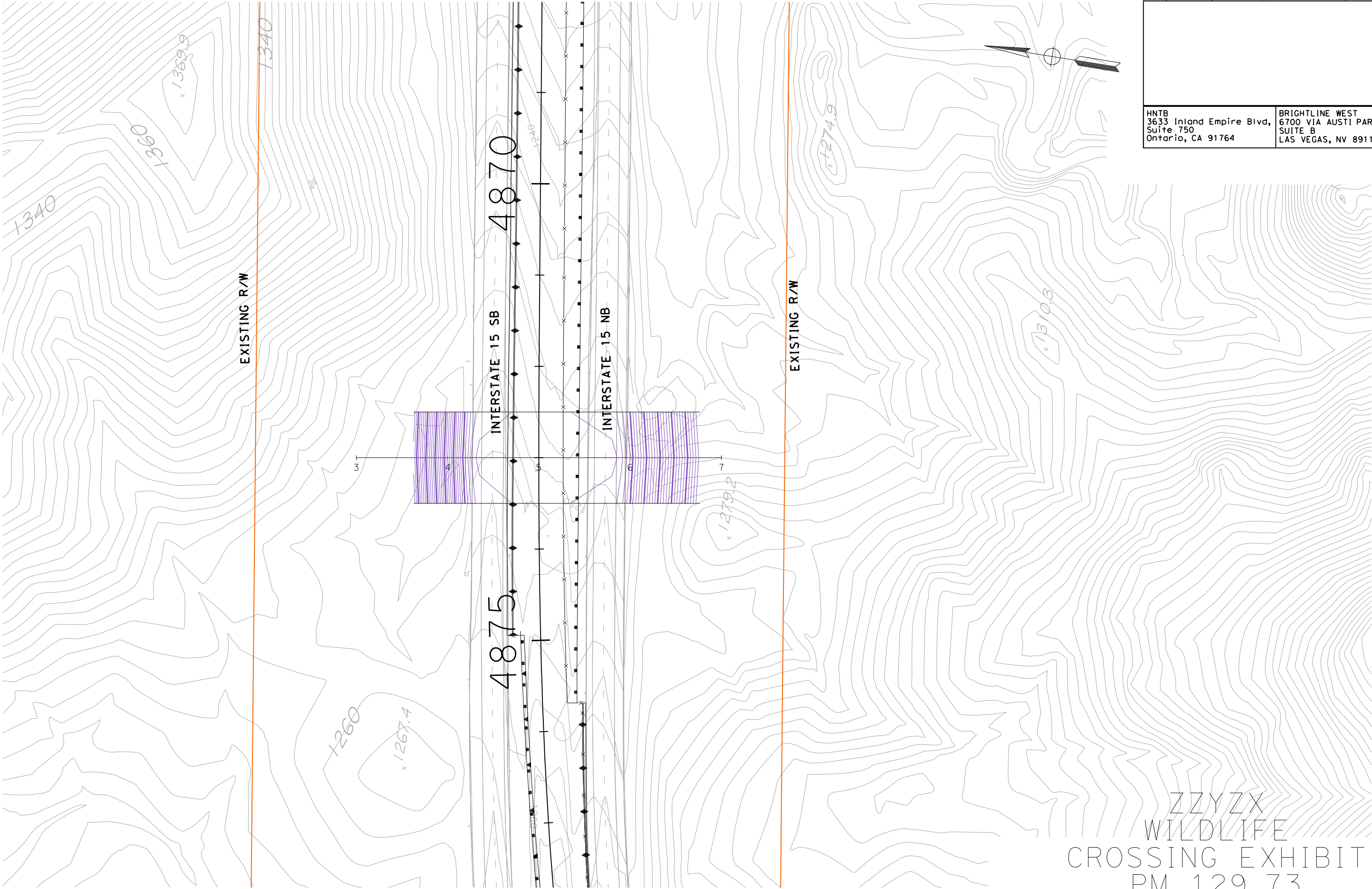
ACCELERATION RESPONSE SPECTRUM

ZZYZX WILDLIFE CROSSING
BRIGHTLINE WEST HIGH-SPEED RAILWAY
PROJECT BAKER, CALIFORNIA



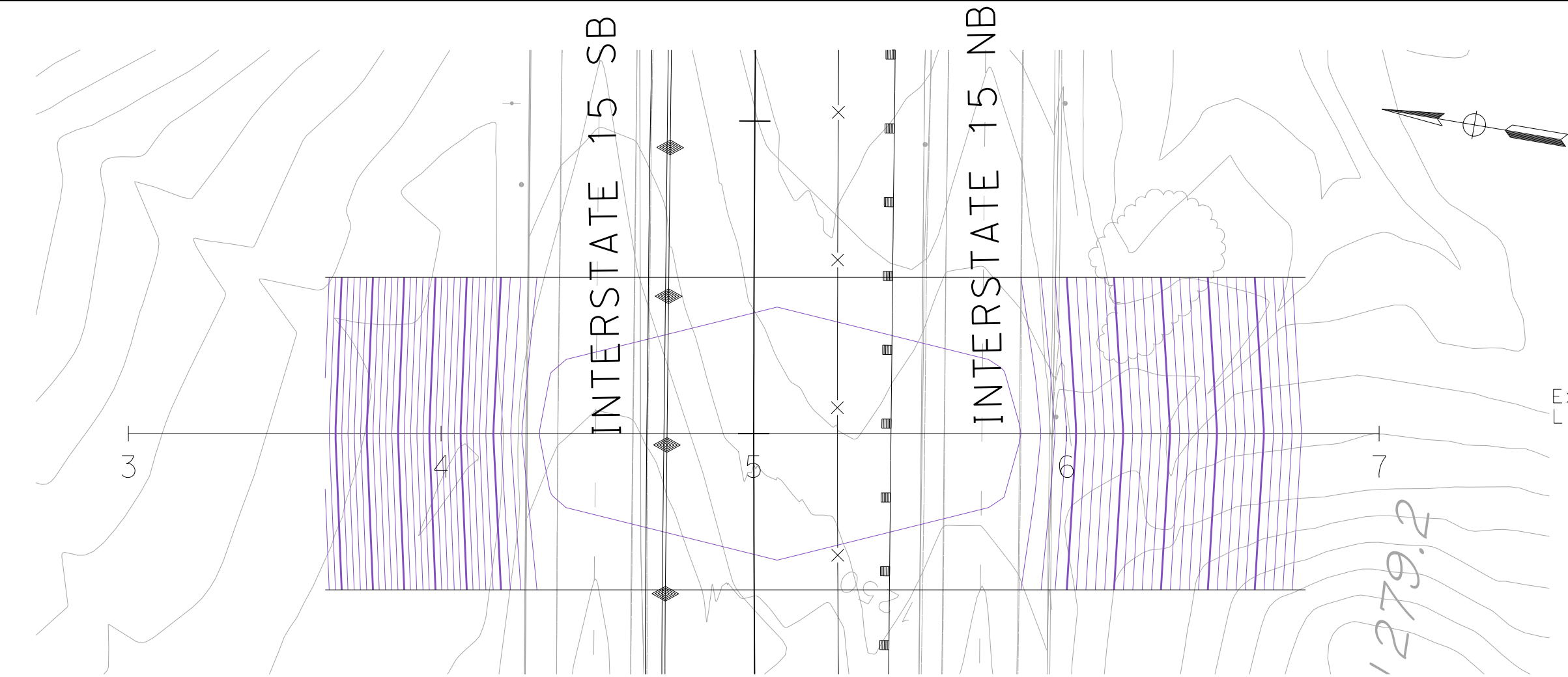
APPENDIX A

Conceptual Exhibits



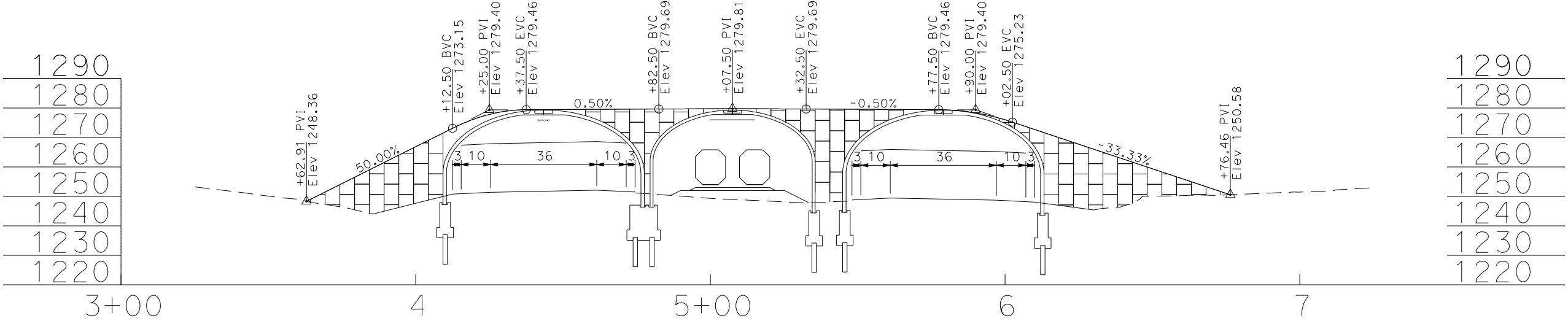
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	51.83/186.1		
HNTB 3633 Inland Empire Blvd, Suite 750 Ontario, CA 91764			BRIGHTLINE WEST 6700 VIA AUSTI PARKWAY, SUITE B LAS VEGAS, NV 89119		

ZZYZX
WILDLIFE
CROSSING EXHIBIT
PM 129.73



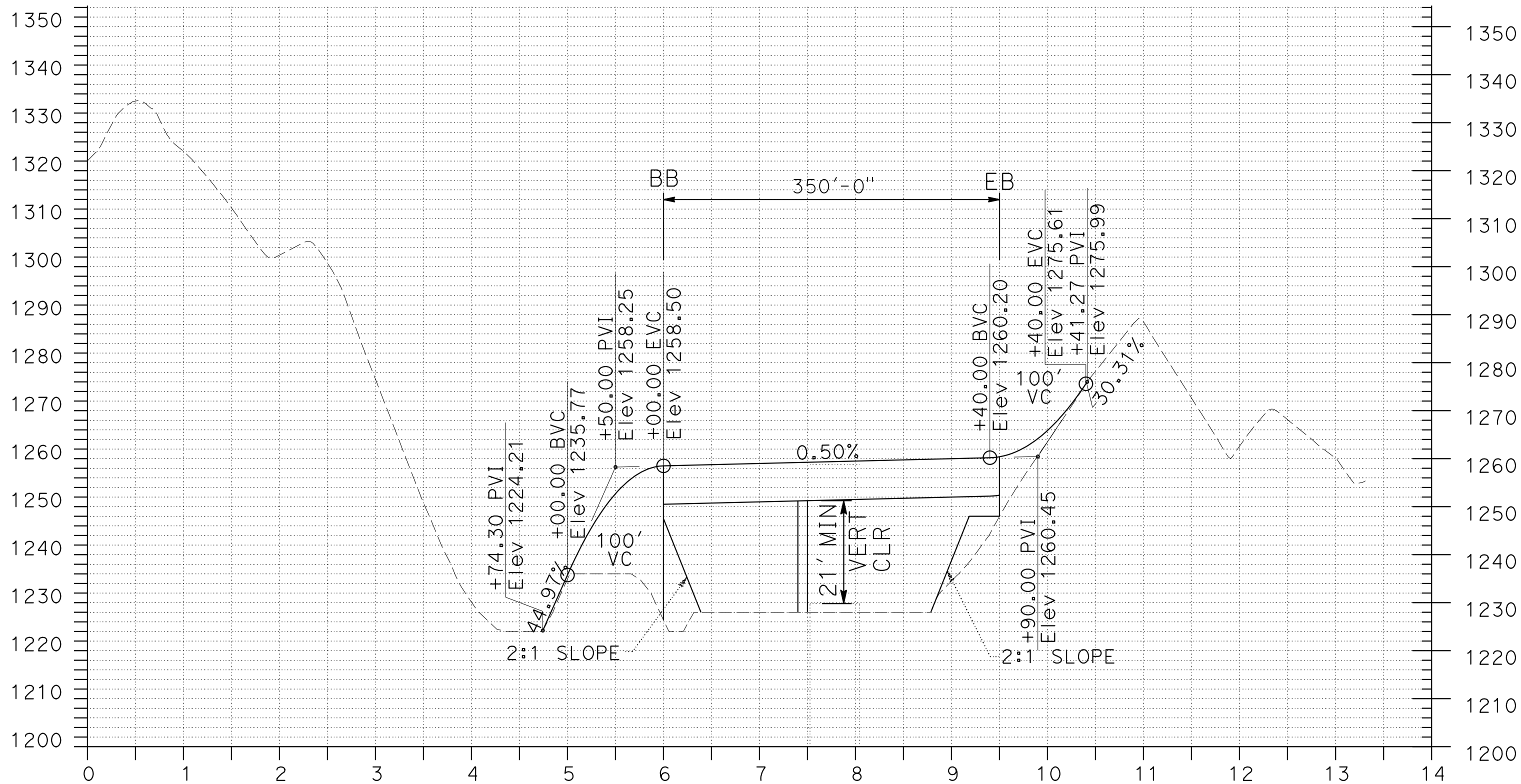
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	51.83/186.1		
HNTB 3633 Inland Empire Blvd, Suite 750 Ontario, CA 91764			BRIGHTLINE WEST 6700 VIA AUSTI PARKWAY, SUITE B LAS VEGAS, NV 89119		

Exist R/W FALLS OUTSIDE OF
LIMITS OF PLAN VIEW THIS SHEET.

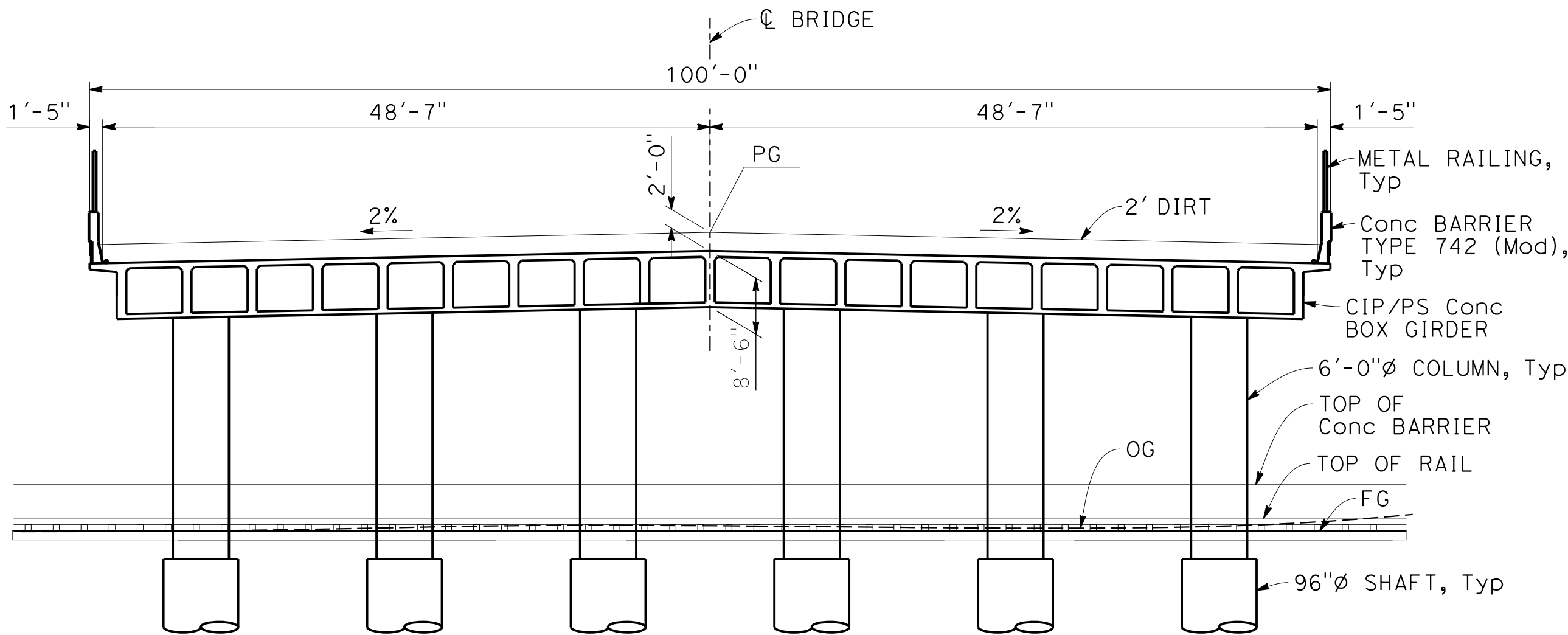


ZZYZX
WILDLIFE
CROSSING EXHIBIT
PM 129.73

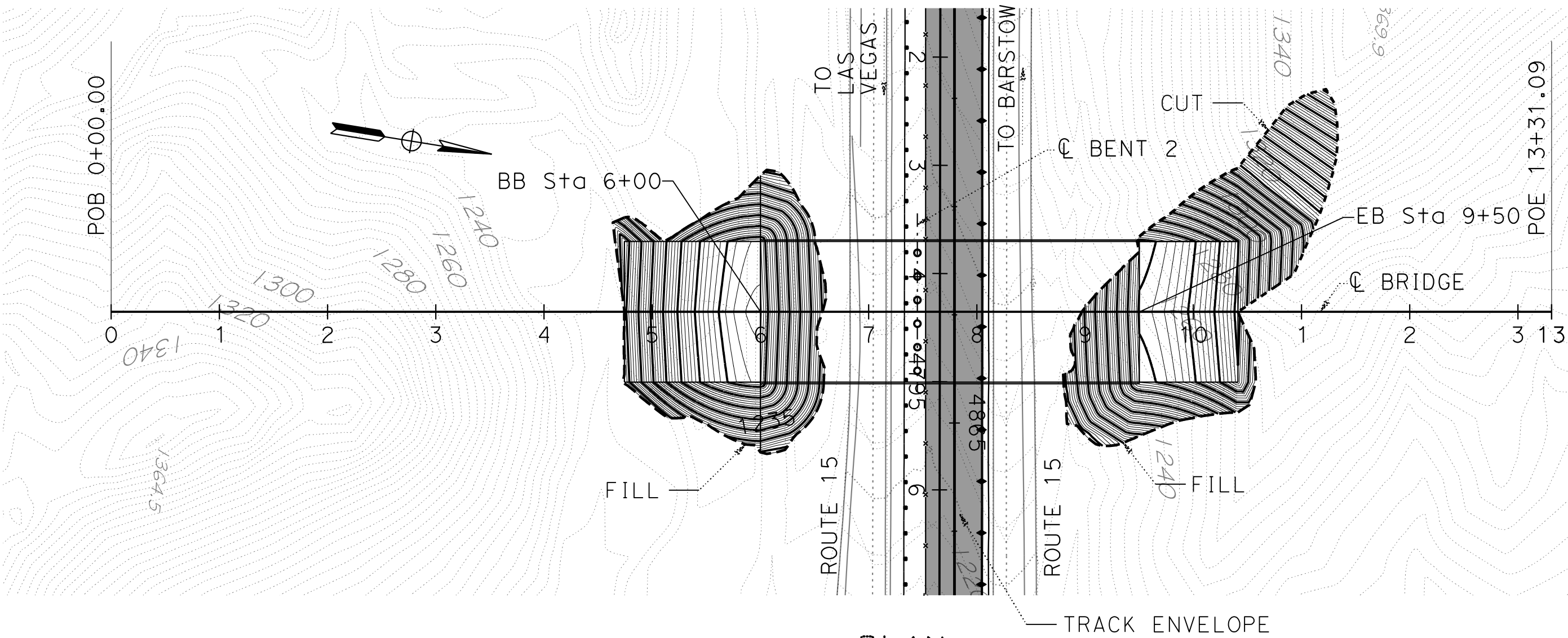
DRAFT - CONCEPT DESIGN



PROFILE GRADE
1" = 200'-0"



TYPICAL SECTION



PLAN
1" = 200'-0"

	DESIGN	BY	CHECKED	SEISMIC ANALYSIS	BY	CHECKED		PROJECT ENGINEER	BRIDGE No.	ZZYXZ WILDLIFE CROSSING										
DESIGN OVERSIGHT	DETAILS	BY	CHECKED	LAYOUT	BY	CHECKED			POST MILE	LOCATION NO. 1 PM R129.9										
SIGN OFF DATE	QUANTITIES	BY X	CHECKED X	SPECIFICATIONS	BY X	PLANS AND SPECS COMPARED X														
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)				DATE PLOTTED => 12-APR-2023 FILE => Animal_Crossing-EXHIBIT-1.dgn USERNAME => lizhang			TIME PLOTTED => 11:34	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0	1	2	3	PROJECT NUMBER & PHASE:		COUNTY/ROUTE: CONTRACT No.:	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES		SHEET	OF



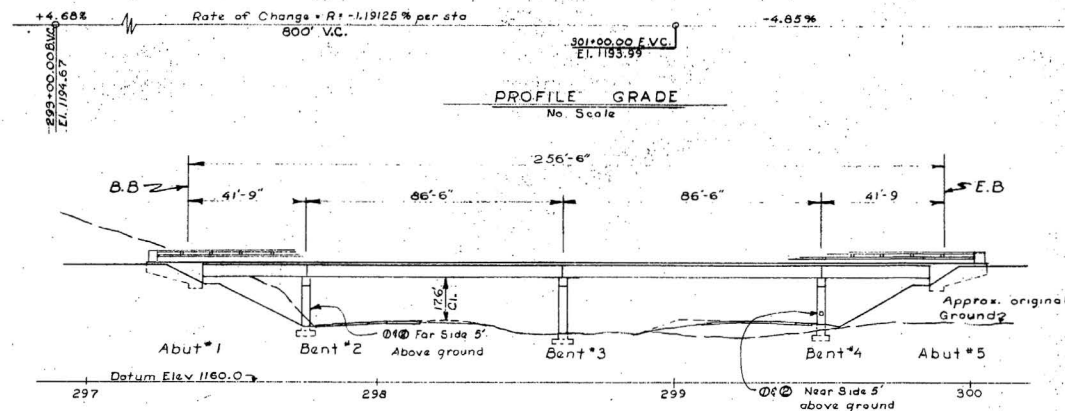
APPENDIX B

As-Built Plans (Soda Road Overcrossing)

I-015-2 (10)121 VII-Sbd-15

STATE	COUNTY	PROJECT NO.	SHEET NO.	TOTAL SHEETS
CALIF.	7		237	427

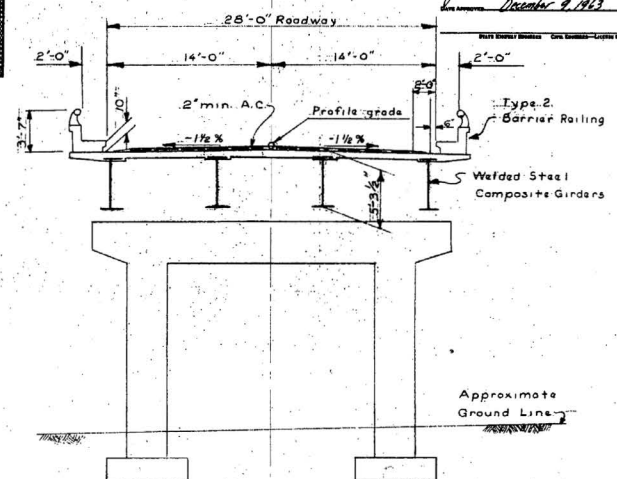
DATE: December 9, 1963
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]



- ① Point Bridge No. 1 Date
- ② Point Soda Rd. O.C.
- Denotes location minimum vertical clearance

ELEVATION
1" = 20'

REDUCED PLAN
 USE SCALE BELOW
 0 1 2 3
 3 INCHES ON ORIGINAL PLAN



TYPICAL SECTION
1" = 5'-0"

APPROXIMATE QUANTITIES

*STRUCTURE EXCAVATION (BRIDGE)	295 C.Y.
*STRUCTURE BACKFILL (BRIDGE)	145 C.Y.
*CLASS "A" CONCRETE (BRIDGE)	405 C.Y.
*BAR REINFORCING STEEL (BRIDGE)	98,000 LBS.
*STRUCTURAL STEEL	210,000 LBS.
CLEANING AND PAINTING STRUCTURAL STEEL	LUMP SUM
BARRIER RAILING (TYPE 2)	587 L.F.

*FINAL QUANTITIES

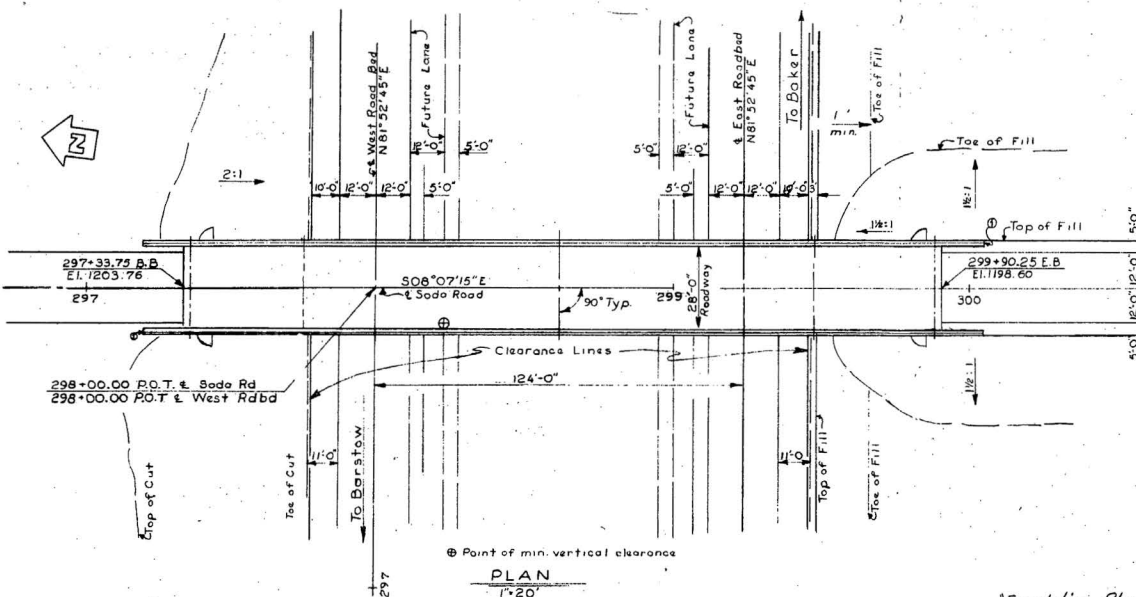
Note:
 For Bridge Details, see
 "Razor Road Overcrossing"
 Br. No. 54-391

INDEX TO PLANS

- 1 General Plan
- 2 Grid Grades
- 3 Foundation Plan
- 4 Abutments
- 5 Bents
- 6 Typical Section
- 7 Steel Layout
- 8 Welded Girder Details
- 9 Log of Test Borings

BRIDGE DETAILS

- B1 Standard Details
- B2 Bearing Details
- B3 Barrier Railing Sheet 1
- B4 Barrier Railing Sheet 2



PLAN
1" = 20'

BRIDGE DEPARTMENT			
DESIGN SECTION 7			
Section Supervisor	[Signature]	Check	[Signature]
Project Designer	[Signature]	Check	[Signature]
DESIGN	[Signature]	Check	[Signature]
DETAILS	[Signature]	Check	[Signature]
LAYOUT	[Signature]	Check	[Signature]
QUANTITIES	[Signature]	Check	[Signature]
SPECIFICATIONS	[Signature]	Check	[Signature]
Approved Recommended by	[Signature]	Old New Lines No.	6782

STATE OF CALIFORNIA			
DEPARTMENT OF PUBLIC WORKS			
DIVISION OF HIGHWAYS			
SODA ROAD OVERCROSSING			
LOCATED IN THE NORTHEAST PORTION OF SAN BERNARDINO COUNTY BETWEEN BARSTOW AND BAKER, ON ROUTE 31			
GENERAL PLAN			
SCALE AS NOTED	BRIDGE 54-398	FILE	DRAWING 54398-1
PRELIMINARY DRAWING No.	P. 5886	5/59	REVISION DATA

FOR GENERAL NOTES SEE "Foundation Plan" sheet.
 LIVE LOADING H20-S16-44 AND ALTERNATIVE

57-08V100391.3

Discard prints bearing earlier revision dates

P. 5886

5/59

REVISION DATA

GENERAL NOTES

DESIGN: A.R.E.D.O. ENTER 1944 WITH REVISIONS AND AS SUPPLEMENTED BY BRIDGE PLANNING AND DESIGN MANUAL.

LIVE LOADING: H20-S16-44 AND ALTERNATIVE

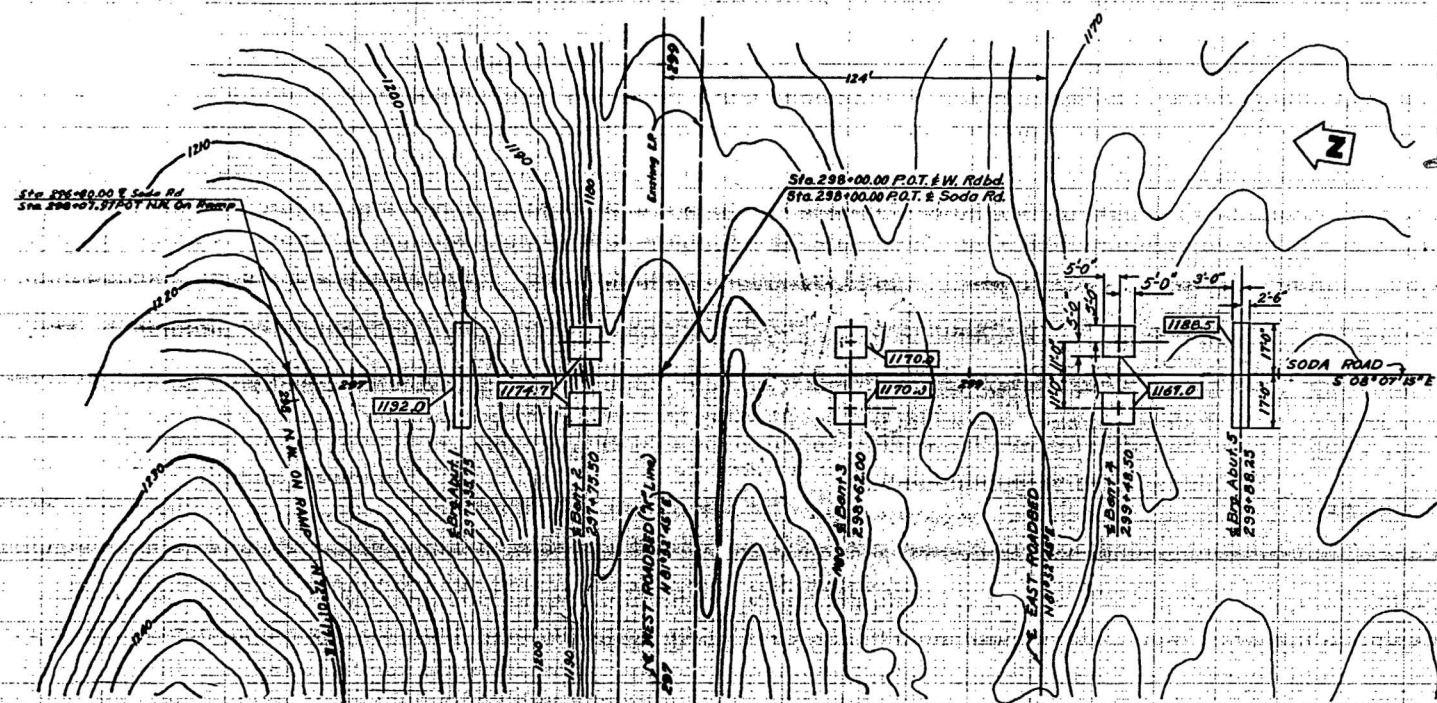
REINFORCED CONCRETE: $F_c = 30,000$ P.S.I., $n = 10$

$F_s = 1,800$ P.S.I.

STRUCTURAL STEEL: $F_s = 30,000$ P.S.I.

FOOTING PRESURE: (1000 P.S.F.) ALLOWABLE DESIGN

ABUTMENT 1	4	4
ABUTMENT 2	4	4
ABUTMENT 3	4	4
ABUTMENT 4	4	4
ABUTMENT 5	2	2



AS BUILT PLANS
 Contract No. **05-039734**
 Date Completed **10-28-46**
 Document No. **80000070**

Notes: All Dents and Abutments are parallel on Bearing $N 81^{\circ} 52' 45'' E$.
 Abut. 1 & 5 are similar except as noted.
 Dents 2 & 3 are similar except as noted.
 Footing elevations are indicated thus: 0000.0

B.M. 20-0-87
 Sp. Mid. road on E & S 1/2" road curved 1'
 200' At Sta. 296+00.00 E. N. Rd. Rd.
 Elev. 1176.84

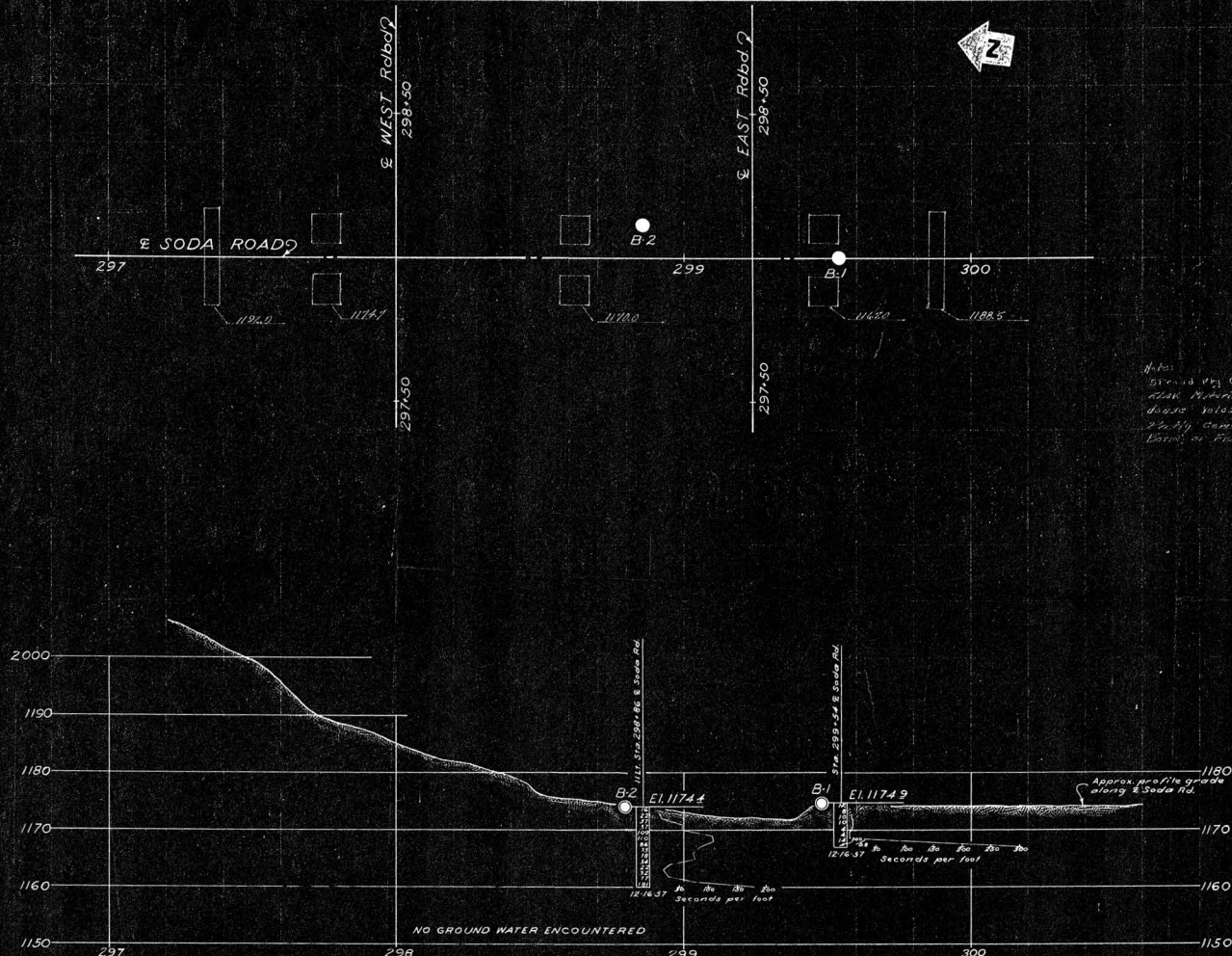
B.M. 20-1-57
 Pin in R/W Monument RD 1/2"
 Sta. 300+00.00 E. N. Rd. Rd.
 Elev. 1185.80

CONTOURS CHECKED AND
 VERIFIED IN FIELD
 Date: 11-26-47
 BY: J.E.

Drawn By: **W.D. 12-1-47**
 Checked By: **L.E. 12-1-47**

BRIDGE DEPARTMENT	
DESIGN SECTION	
Project Engineer: J.D. 12-1-47	
Chief Designer: J.D. 12-1-47	
DESIGNER: J.D. 12-1-47	CHECKER: J.D. 12-1-47
DETAILS: J.D. 12-1-47	CHECKER: J.D. 12-1-47
QUANTITIES: J.D. 12-1-47	CHECKER: J.D. 12-1-47
APPROVED: J.D. 12-1-47	CHECKER: J.D. 12-1-47

STATE OF CALIFORNIA DEPARTMENT OF PUBLIC WORKS DIVISION OF HIGHWAYS	
SODA ROAD OVERCROSSING	
FOUNDATION PLAN	
Scale: 1" = 20'	Sheet: 1 of 1

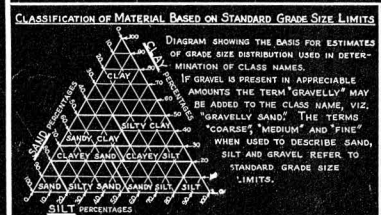


Notes:
 Boring B-1 constructed to permit
 close inspection of material
 during installation of bridge and
 to determine depth of
 water in the pond.

B.M. # 30-B-57
 Sp. Hd. nail in 2"x2" wood pile
 buried 1' 200' RT Sta. 295+30
 E. Soda Rd. Elev. 1170.94

AS BUILT
 CORRECTIONS BY: [Signature]
 CONTRACT NO. 54-398
 DATE: December 9, 1950

SHEET 9 OF 9



LEGEND OF EARTH MATERIALS

GRAVEL	SILTY CLAY OR CLAYEY SILT
SAND	PEAT AND/OR ORGANIC MATTER
SILT	FILL MATERIAL
CLAY	IGNEOUS ROCK
SANDY CLAY OR CLAYEY SAND	SEDIMENTARY ROCK
SANDY SILT OR SILTY SAND	METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS

PLAN OF ANY BORING	Top Hole El.	Location
PENETROMETER	Blows per foot	Unit weight (pcf)
2 1/2" CONE PENETROMETER	Blows per foot	Unit weight (pcf)
SAMPLER BORING (DRY)	Blows per foot	Unit weight (pcf)
ROTARY BORING (WET)	Blows per foot	Unit weight (pcf)
ROTARY BORING (DRY)	Blows per foot	Unit weight (pcf)
AUGER BORING (DRY)	Blows per foot	Unit weight (pcf)
JET BORING	Blows per foot	Unit weight (pcf)
CORE BORING	Blows per foot	Unit weight (pcf)
TEST PIT	Blows per foot	Unit weight (pcf)

NOTES

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

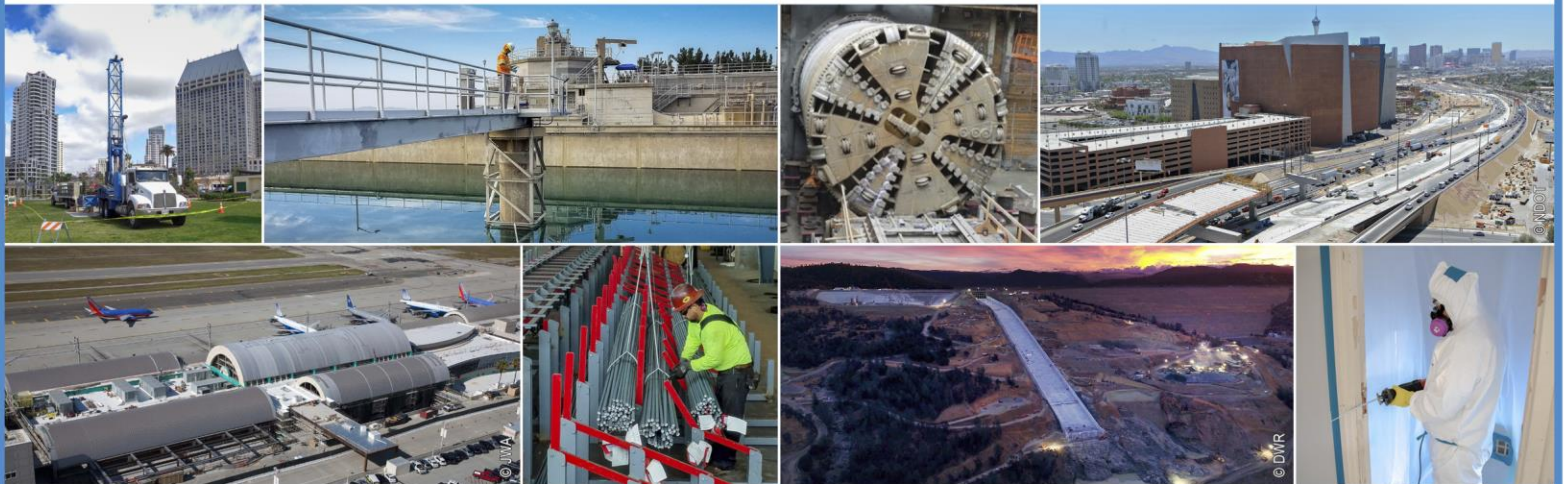
STATE OF CALIFORNIA
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS

SODA ROAD OVERCROSSING

LOG OF TEST BORINGS

Map: 1"=20'
 Scale: 1"=10'

BRIDGE 54-398 FILE
 DRAWING 54-398-9



475 Goddard, Suite 200 | Irvine, California 92618 | p. 949.753.7070

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

ninyoandmoore.com

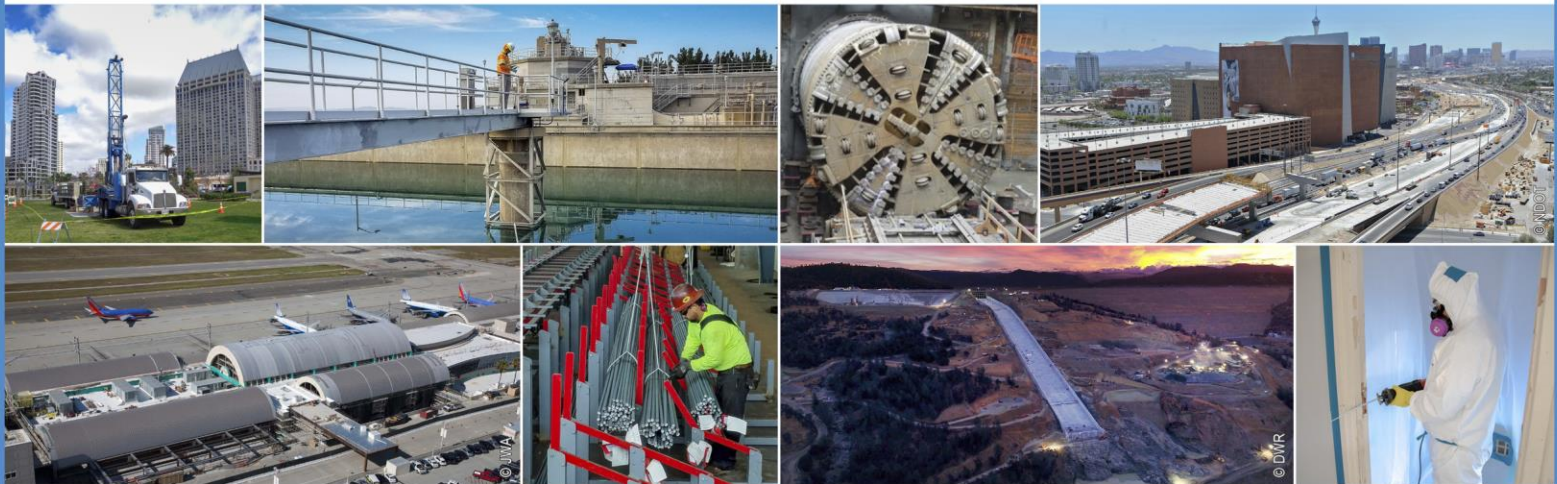
Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Structure Preliminary Geotechnical Report (SPGR) Clark Mountain Wildlife Crossing Brightline West High-Speed Railway Project Mountain Pass, California 08-SBd-15-PM 168.06

Brightline West

3920 West Hacienda Avenue | Las Vegas, Nevada 89118

April 17, 2023 | Project No. 211570003



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Structure Preliminary Geotechnical Report (SPGR)
Clark Mountain Wildlife Crossing
Brightline West High-Speed Railway Project
Mountain Pass, California
08-SBd-15-PM 168.06

Mr. Adrian Share, PE
Brightline West
3920 West Hacienda Avenue | Las Vegas, Nevada 89118

April 17, 2023 | Project No. 211570003


Spencer Marcinek, PE, GE
Senior Project Engineer




Madan Chirumalla, PE, GE
Principal Engineer



SCM/MAC/RDH/mlc


Ronald Hallum, PG, CEG
Principal Geologist



CONTENTS

1	INTRODUCTION	1
2	SCOPE OF SERVICES	1
3	PROJECT DESCRIPTION	1
4	GEOTECHNICAL INVESTIGATION	2
5	GEOTECHNICAL CONDITIONS	3
5.1	Surface Conditions	3
5.2	Regional Geologic Setting	3
5.3	Local Geologic Setting and Subsurface Conditions	4
5.4	Groundwater	5
6	AS-BUILT DATA	5
7	SCOUR DATA	6
8	CORROSIVITY	6
9	FAULTING AND SEISMICITY	7
9.1	Surface Fault Rupture	7
9.2	Ground Motion	7
9.3	Liquefaction Potential	8
9.1	Seismic Slope Stability	8
10	PRELIMINARY GEOTECHNICAL RECOMMENDATIONS	9
11	ADDITIONAL FIELD WORK AND LABORATORY TESTING	10
12	LIMITATIONS	10
13	REFERENCES	11

TABLE

1 – Spread Footing Data	5
-------------------------	---

FIGURES

- 1 – Site Location
- 2 – Regional Geology
- 3 – Fault Locations
- 4 – Acceleration Response Spectrum

APPENDICES

A – Conceptual Exhibits

B – As-Built Plans (Clark Mountain Ditch Bridge)

C – Previous Ninyo & Moore Boring Logs and Laboratory Testing

1 INTRODUCTION

In accordance with your request and authorization, we have prepared a Structure Preliminary Geotechnical Report (SPGR) for the Clark Mountain Wildlife Crossing Project in Mountain Pass, an incorporated community in San Bernardino County, California (Figure 1). The wildlife crossing is planned as part of the construction of the Brightline West High-Speed Railway Project. The project is currently in the preliminary design phase and the purpose of our study was to evaluate the soil, geologic, and groundwater conditions at the project site and to provide preliminary recommendations regarding the geotechnical aspects of the project based on our background review and site reconnaissance. Our SPGR was prepared in general accordance with the California Department of Transportation (Caltrans) guidelines. During subsequent design phases, we will prepare a Preliminary Foundation Report (PFR) and Foundation Report (FR) for the project. These reports will include subsurface evaluation, laboratory testing, geotechnical engineering analysis, and will present our updated conclusions and recommendations for design and construction of the project. We have previously submitted the SPGR dated March 31, 2023 for this project. Subsequent to our report, another bridge alternative conceptual exhibit was provided to us. Our report is updated to include this bridge alternative.

2 SCOPE OF SERVICES

Our report was prepared in general accordance with Section 2, Structure Preliminary Geotechnical Report, from the Caltrans Guidelines for Foundation Reports for Bridges (Caltrans, 2021a). The scope of our geotechnical services included the following:

- Project coordination and consultation with the project team.
- Review of readily available background materials, including geologic and seismic hazard maps, published literature, stereoscopic aerial photographs, in-house information, existing plans, reports, and previous log of test borings for a nearby bridge.
- Performance of a geotechnical site reconnaissance to observe existing conditions at the location of the Clark Mountain Wildlife Crossing.
- Data compilation and engineering analysis of the information obtained from our background review and site reconnaissance.
- Preparation of this SPGR in general accordance with Caltrans guidelines.

3 PROJECT DESCRIPTION

The proposed Clark Mountain Wildlife Crossing is located in Mountain Pass, an incorporated community in San Bernardino County, California (approximately 14 miles southwest of the California-Nevada State line and 31 miles northeast of Baker, California). The proposed bridge crosses over Interstate 15 (I-15) at Post Mile 168.06 (Appendix A). Clark Mountain Ditch Bridge

is located approximately 400 feet west of the proposed wildlife crossing. The Clark Mountain Wildlife Crossing may consist of a three-vault (two for north-bound and south- I-15 traffic and one for the railroad alignment) bridge providing wildlife access between the north and south sides of the alignment. The structure may consist of structural backfill between mechanically stabilized earth walls. Another bridge alternative may consist of cast-in-place/prestressed (CIP/PS) concrete box girder supported on approximately 6 feet diameter columns. We anticipate that earthwork at the site will consist of construction of fill slopes, relatively minor cuts and fills to prepare the area for site drainage, foundation excavations, trenching and backfilling for new utilities, and grading for the new pavement and landscaping areas. The length of the wildlife crossing is proposed to be approximately 375 feet and the maximum height is anticipated to be approximately 42 feet (Appendix A). A conceptual exhibit of the wildlife crossing is presented in Appendix A. The CIP/PS bridge alternative conceptual exhibit shows a slightly different location (Post Mile and Station Numbers). Based on our discussions with the client, we understand that the CIP/PS bridge alternative conceptual exhibits were prepared in the past and will be revised to show the correct proposed bridge location (Post Mile 168.06) during the next phase.

4 GEOTECHNICAL INVESTIGATION

A California-certified engineering geologist from Ninyo & Moore visited the site on March 20, 2023. The surface and geologic conditions were observed and written and photographic documentation of the site were made.

Previous geotechnical investigation within the site vicinity includes a study performed by the State of California for the Clark Mountain Ditch Bridge (Bridge No. 54-0304R/L) located approximately 400 feet to the west. One rotary boring and four penetration borings were performed by the State of California in 1960, for Clark Mountain Ditch Bridge to depths ranging from approximately 15 to 21 feet below the ground surface. The penetration rate in seconds per foot using a No. 2 McKiernan-Terry air hammer at 115 pounds per square inch was measured in the penetration borings. Four additional rotary borings were performed by Caltrans in 2001, for the widening of Clark Mountain Ditch Bridge (Bridge No. 54-0304R) to depths ranging from approximately 15 to 31 feet below the ground surface. The Log of Test Boring sheets are presented in Appendix B.

Additionally, Ninyo & Moore previously conducted a preliminary geotechnical evaluation for the North Segment of the Brightline West High-Speed Railway alignment in 2020 and summarized the results in a geotechnical data report (Ninyo & Moore, 2022). As part of that previous evaluation, two of the borings designated as R-20-144 and R-20-146, were drilled within the center median of I-15 on the west and east sides of Clark Mountain Ditch, respectively. The coordinates for boring R-20-144 are 35.473668 degrees north and 115.589105 degrees west and

the coordinates for boring R-20-146 are 35.473729 degrees north and 115.588757 degrees west. Borings R-20-144 and R-20-146 were drilled to depths of approximately 56.1 and 75.4 feet below the ground surface, respectively. Geotechnical laboratory testing was performed on representative samples to evaluate the in-situ moisture content and dry density, percentage of particles finer than the No. 200 sieve, Atterberg limits, collapse potential, and soil corrosivity. The borings logs and laboratory testing results from Ninyo & Moore's evaluation are included in Appendix C.

5 GEOTECHNICAL CONDITIONS

The following sections describe the surface, geologic, soil, and groundwater conditions at the site.

5.1 Surface Conditions

The site is located within a valley along the I-15 corridor between a northerly ascending slope to the north and a southerly ascending slope to the south. The terrain along I-15 at the site is relatively flat and gently slopes down towards the southwest. Ground elevations within the wildlife crossing area range from approximately 4,430 feet above Mean Sea Level (MSL) on the north side of I-15 to approximately 4,458 feet above MSL on the south side of I-15 (Appendix A). Loose rocks were observed on the southern hillside of the wildlife crossing indicating a potential hazard for rockfalls during storms and earthquakes. The site latitude and longitude are approximately 35.47392 degrees north and -115.58767 degrees west, respectively (Google Earth, 2023).

One drainage area is shown on the conceptual plan on the north side of I-15 (Brightline West, 2023). The hydrology/hydraulic conditions at the site were described in the foundation recommendations letter for the widening of Clark Mountain Ditch Bridge (Caltrans, 2001b). The letter indicates that the drainage area is 2.9 square miles and the 50-year flood and 100-year flood could discharge 1,441 to 2,299 cubic feet per second with water surface elevations for the right bridge at 4,442.4 to 4,443.2 feet and an average flow velocity of 13.5 to 15.6 feet per second, respectively (Caltrans, 2001b). The channels along Clark Mountain Ditch Bridge are sparsely vegetated and protected by rip rap. Drainage is generally by sheet flow within the center median of I-15.

5.2 Regional Geologic Setting

The proposed wildlife crossing is located within the Mojave Desert Geomorphic Province of California and is characterized by mountain ranges and hills of moderate relief that are partially buried and separated by broad alluviated basins. The valleys in the Mojave Desert province are proportionally broader and mountains are more widely spaced and the mountains generally do

not stand as high above their surroundings as in the neighboring Basin and Range province and Transverse Ranges province (Norris and Webb, 1990).

The mountain ranges and hills within the Mojave Desert province are comprised primarily of Mesozoic era (65 to 245 million years old) granitic and volcanic rocks and Paleozoic era (245 to 570 million years old) metamorphic and sedimentary rocks. These rocks generally include Mesozoic era granite, quartz monzonite, and porphyritic volcanic rocks and Paleozoic era gneiss, limestone, and dolomite. Some Tertiary age (2 to 65 million years old) surface exposures of non-marine volcanic and sedimentary rocks are mapped east of Barstow, in the Soda Mountains and in the Jean Hills area. Valleys, drainage areas, and alluvial fans along the flanks of mountains and valleys are underlain at depth by the basement rocks described above but have been filled by Quaternary age (last 2 million years) stream and lake deposits, alluvial fan deposits, and other alluvial sediments.

5.3 Local Geologic Setting and Subsurface Conditions

Published geologic maps indicate that the proposed wildlife crossing is generally underlain by Holocene- age alluvial sediments consisting of unconsolidated, sand, silt, and clay (Evans, 1971). The northern end of the wildlife crossing is mapped near the boundary of Pleistocene-age older alluvium consisting of poorly sorted pebbles to boulders set in a matrix of brown silt. The southern end of the wildlife crossing is mapped at the boundary of Upper Cambrian and Lower Devonian-age Goodsprings Dolomite (undifferentiated, limy, thin-bedded, and medium- to coarse-grained). In addition, artificial fills associated with the construction of I-15 were also observed at the wildlife crossing site. These materials were observed to be up to roughly 10 feet in depth and consist of poorly consolidated sandy cobble gravel and gravelly sands. A regional geologic map for the site vicinity is shown on Figure 2.

Materials encountered during the previous subsurface evaluations at Clark Mountain Ditch Bridge consisted of artificial fill underlain by alluvium. The embankment fill thickness ranged from approximately 10 to 14 feet and up to 5.5 feet of artificial fill/recent stream deposits were encountered within the stream channel. The artificial fill generally consisted of loose to very dense gravel and cobbles with a silty sand matrix (Caltrans, 2001). Alluvium was encountered beneath the fill to the depth explored of approximately 31 feet below the ground surface in 2001 Caltrans borings (Appendix B). Alluvium was encountered from the ground surface to the depth explored of 75.4 feet below the ground surface in the previous Ninyo & Moore borings (Appendix C). The alluvium generally consisted of dry to moist, loose to very dense, well-graded gravel with silt, well-graded gravel with clay, poorly graded gravel with silt, poorly graded gravel with clay, clayey gravel, silty sand, and clayey sand. Cobbles and boulders were present in the fill and alluvium.

The rock fragments within the fill and alluvium were generally subangular, hard, dolomite, limestone, chert, and igneous rock fragments. Previous Ninyo & Moore laboratory testing indicated that the near-surface soils are collapsible (Appendix C).

5.4 Groundwater

Groundwater was not encountered in the exploratory borings during the previous subsurface explorations in 1960, 2001, and 2020 for Clark Mountain Ditch Bridge to the depths explored of up to approximately 75.4 feet below the ground surface. Groundwater monitoring data from the State of California Department of Water Resources (2023) indicates groundwater depth fluctuations from 14 to 515 feet below the ground surface between 1953 and 1984 based on information from eight monitoring wells located within an approximately eight-mile radius from the site. Groundwater levels are subject to variation due to seasonal rainfall, irrigation, groundwater pumping, subsurface stratigraphy, topography, and other conditions. The groundwater depths at the site should be further evaluated during a subsequent design phase.

6 AS-BUILT DATA

The as-built data of the nearby Clark Mountain Ditch Bridge, Bridge No. 54-0304R, is discussed in this section. The as-built plan and the widening foundation recommendations letter (Caltrans, 2001a and b) indicate that the original Clark Mountain Ditch Bridge was constructed in the early 1960's and consists of a four-span, concrete slab bridge supported on spread footings. There are two abutments (Abutments 1 and 5) and three bents/piers (Piers 2, 3, and 4). The bridge was widened after 2001 by approximately 19 feet to the north. The length and width of the bridge are approximately 72 and 59 feet, respectively. The abutments and bents are supported on spread footings. The spread footing data for the bridge widening is presented in Table 1 below. The available as-built plans are presented in Appendix B.

Table 1 – Spread Footing Data				
Location	Minimum Footing Width (Abutments)/Lateral Dimensions (Width x Length) of Footing (Bents) (feet)	Bottom of Footing Elevation (feet)	Recommended Soil Bearing Pressures	
			ASD	LFD
			Gross Allowable Soil Bearing Pressure (tsf)	Ultimate Soil Bearing Pressure (tsf)
Abutment 1	2.5 (Match Existing) 4.0 (Alternative Width)	4,442.9	1.31 1.55	N/A
Pier 2	6.5 x 6.5	4,428.5	N/A	9.45
Pier 3	6.5 x 6.5	4,428.5	N/A	9.45
Pier 4	6.5 x 6.5	4,428.5	N/A	9.45

Table 1 – Spread Footing Data				
Location	Minimum Footing Width (Abutments)/Lateral Dimensions (Width x Length) of Footing (Bents) (feet)	Bottom of Footing Elevation (feet)	Recommended Soil Bearing Pressures	
			ASD	LFD
			Gross Allowable Soil Bearing Pressure (tsf)	Ultimate Soil Bearing Pressure (tsf)
Abutment 5	2.5 (Match Existing)	4,443.7	0.98	N/A
	4.0 (Alternative Width)		1.14	
Notes: ASD – Allowable Stress Design LFD – Load Factor Design tsf – tons per square foot				

7 SCOUR DATA

We anticipate that drainage is generally by sheet flow within the center median of I-15. Also, since a drainage channel is located along the north side of I-15 (Brightline West, 2023), the proposed wildlife crossing extends across known water courses. The near-surface artificial fill and alluvium are considered potentially scourable. Since the site extends over known water courses and since the hydrology/hydraulic details were not available for our review at the time of this evaluation, we recommend that scour depth be evaluated by the civil engineer during a subsequent design phase. We anticipate that the proposed improvements will handle much of the surface runoff during periods of precipitation.

A scour study was performed for the widening of Clark Mountain Ditch Bridge and the findings were summarized in the foundation recommendations letter (Caltrans, 2001b). It was reported that the channel is stable laterally and vertically near the bridges and no drift problems were indicated. The total potential scour including local pier scour and long-term degradation was estimated to be 6.7 feet (local pier scour was estimated to be 3 feet at the widening of Piers 2 and 3 and 5.5 feet at the widening of Pier 4). Dense alluvial soil is present below the scour depths. On a preliminary basis, we anticipate similar scour conditions for the Clark Mountain Wildlife Crossing.

8 CORROSIVITY

Corrosivity testing was performed on a nearby soil sample during the geotechnical evaluation for the widening of Clark Mountain Ditch Bridge (Caltrans, 2001b) and on two samples from borings R-20-144 and R-20-146 during the preliminary geotechnical evaluation for the North Segment of the Brightline West High-Speed Railway alignment (Ninyo & Moore, 2022). The soil pH of the samples tested ranged from 7.9 to 8.6 and the electrical resistivity ranged from 477 to 2,452 ohm-centimeters. The chloride content ranged from 155 to 540 parts per million (ppm). The sulfate

content ranged from 0.004 percent by weight (40 ppm) to 0.012 percent by weight (120 ppm). Based on the laboratory test results and Caltrans corrosion criteria (2021d), the project site can be classified as a corrosive site. Caltrans currently considers a site to be corrosive to foundation elements if the minimum electrical resistivity is 1,500 ohm-cm or less, chloride concentration is 500 ppm or more, sulfate concentration is 1,500 ppm or more, or the pH is 5.5 or less. For preliminary design purposes we anticipate that the project site can be classified as a corrosive site. The on-site materials should be tested for corrosive properties during the subsequent design phase.

9 FAULTING AND SEISMICITY

The site is in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant during the design life of the proposed project. Figure 3 shows the approximate site location relative to the major faults in the region. The site is not located within a State of California Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone) (Hart and Bryant, 2018). The nearest mapped active fault to the site is the Garlock fault located approximately 45.3 miles northwest of the site (United States Geological Survey [USGS], 2023a).

In general, seismic hazards that could impact the project include ground surface rupture, strong ground motion, liquefaction, and seismic slope stability that are discussed in the following sections.

9.1 Surface Fault Rupture

Based on our review of the referenced literature, no active faults are known to cross the project site. Therefore, the probability of damage from surface ground rupture is considered to be low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

9.2 Ground Motion

Considering the proximity of the site to active faults capable of producing a maximum magnitude ($M_{\max}$) of 6.0 or more, the project area has a high potential for experiencing strong ground motion. Version 3.02 of the Caltrans Acceleration Response Spectra (ARS) online tool (Caltrans, 2023) was used to calculate the design seismic event with respect to the proposed improvements. The design ARS represents the United States Geological Survey (USGS, 2014) 5 percent in 50 years hazard at 5 percent damping and includes near-fault effects and basin amplification effects.

The input parameters for the Caltrans ARS online tool consist of the site latitude, site longitude, and average shear wave velocity (V_s) in the upper 100 feet (i.e., 30 meters) (V_{s30}). Based on our review of California Geological Survey's (CGS) shear wave velocity map, the V_{s30} is estimated to be approximately 1,155 feet per second (352 meters per second) (CGS, 2015). This shear wave velocity is representative of a site mapped on very dense soil or soft rock. The preliminary design ARS curve evaluated for the site is presented on Figure 4 and the calculated peak ground acceleration (PGA) is 0.16g and the mean moment magnitude is 6.51. The V_{s30} should be evaluated during a subsequent design phase and the design ARS curve and PGA should be updated accordingly, as applicable.

9.3 Liquefaction Potential

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

According to San Bernardino County Land Use Plan (2007), the project site is not located in an area mapped as being susceptible to liquefaction. Groundwater was not encountered in the previous borings at Clark Mountain Ditch Bridge to a depth of 75.4 feet. Based on the historic depth to groundwater and the presence of relatively dense sand, gravel, cobbles, and boulders, it is our opinion that liquefaction and liquefaction-related seismic hazards (e.g., dynamic settlement, ground subsidence, and/or lateral spreading) are not design considerations for the project.

9.1 Seismic Slope Stability

Based on the conceptual exhibits (Appendix A), significant grading of the hillside slopes is not planned for the project. Minor grading may consist of removal of loose soils near the toe of the hillside on the south to place compacted fill for the bridge approach embankments. On a preliminary basis, seismic slope stability is not anticipated to be a design consideration for the project.

10 PRELIMINARY GEOTECHNICAL RECOMMENDATIONS

The purpose of this SPGR was to perform a preliminary evaluation of the soil, geologic, and groundwater conditions in the area of the proposed improvements for general planning purposes. Based on our preliminary evaluation, it is our opinion that the project is feasible from a geotechnical perspective. A detailed geotechnical evaluation will be performed during a subsequent design phase, including the PFR and FR, to develop appropriate design and construction recommendations for the project.

We anticipate that, from a geotechnical perspective, the wildlife crossing may be supported on shallow foundations. One of the geotechnical considerations for the shallow foundations include differential settlement between the foundations supported on differing geologic units (i.e., alluvium and bedrock). Based on our site reconnaissance and background review, bedrock is mapped on the south side of the wildlife crossing and alluvium is mapped on the north side of the wildlife crossing; therefore, remedial grading consisting of removing fill and loose alluvium and collapsible soils to expose firm and unyielding alluvium or bedrock should be anticipated during construction. The depth of fill, potential presence of underground utilities or other improvements, and the depth and lateral extent of excavations for foundation construction can potentially impact the feasibility of shallow foundations. The feasibility of shallow foundations should be further evaluated during the subsequent design phase. Settlement calculations for the shallow foundations should also be performed during a subsequent design phase, as applicable.

Deep foundations may also be utilized for the bridge. If deep foundations are used for the project, we would recommend cast-in-drilled-hole (CIDH) piles. However, due to the potential for difficult drilled excavations into cohesionless fill and alluvial soils consisting of gravel, cobbles, and boulders to construct CIDH piles, shallow foundations are the preferred alternative from a geotechnical perspective. Driven piles are not recommended due to the presence of dense gravel, cobbles, and boulders, and the potential for difficult driving conditions or driving refusal at shallow depths.

In general, the proposed wildlife crossing design should be prepared in accordance with the American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Bridge Design Specifications (2020), the Caltrans California Amendments to the AASHTO LRFD Bridge Design Specifications (2019d), and other applicable Caltrans design manuals.

11 ADDITIONAL FIELD WORK AND LABORATORY TESTING

The available subsurface information does not provide sufficient data to complete the design recommendations for Clark Mountain Wildlife Crossing. This geotechnical report was performed for preliminary planning purposes. The project is currently in conceptual design and the structure details may be subject to change. During a subsequent design phase, Ninyo & Moore will perform additional geotechnical evaluations. The additional geotechnical evaluations would consist of obtaining the excavation and boring permits, subsurface exploration, geotechnical laboratory testing, and engineering analysis. Due to the presence of gravel, cobbles, and boulders and shallow bedrock, pushing cone penetration test soundings to target depths may not be successful. Borings are anticipated to extend to a depth of 20 feet below the proposed foundation bottoms or up to approximately 60 feet below the ground surface or refusal. We anticipate that the additional subsurface exploration will be performed in the center median and shoulder of I-15. Geotechnical laboratory testing is anticipated to consist of moisture content and dry density, grain size (sieve) analysis, expansion index, collapse potential, direct shear, and corrosivity, as applicable. The design of project improvements should be based on the subsequent geotechnical evaluation results and recommendations.

12 LIMITATIONS

This report is based on review of data collected by others. No subsurface exploration or laboratory testing at the site was performed by Ninyo & Moore. Our findings are based, in part, on the veracity of the data prepared by others. The geotechnical evaluation presented in this report has been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every surface and/or subsurface condition. Variations may exist and conditions not observed or described in this report may be encountered during construction.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

13 REFERENCES

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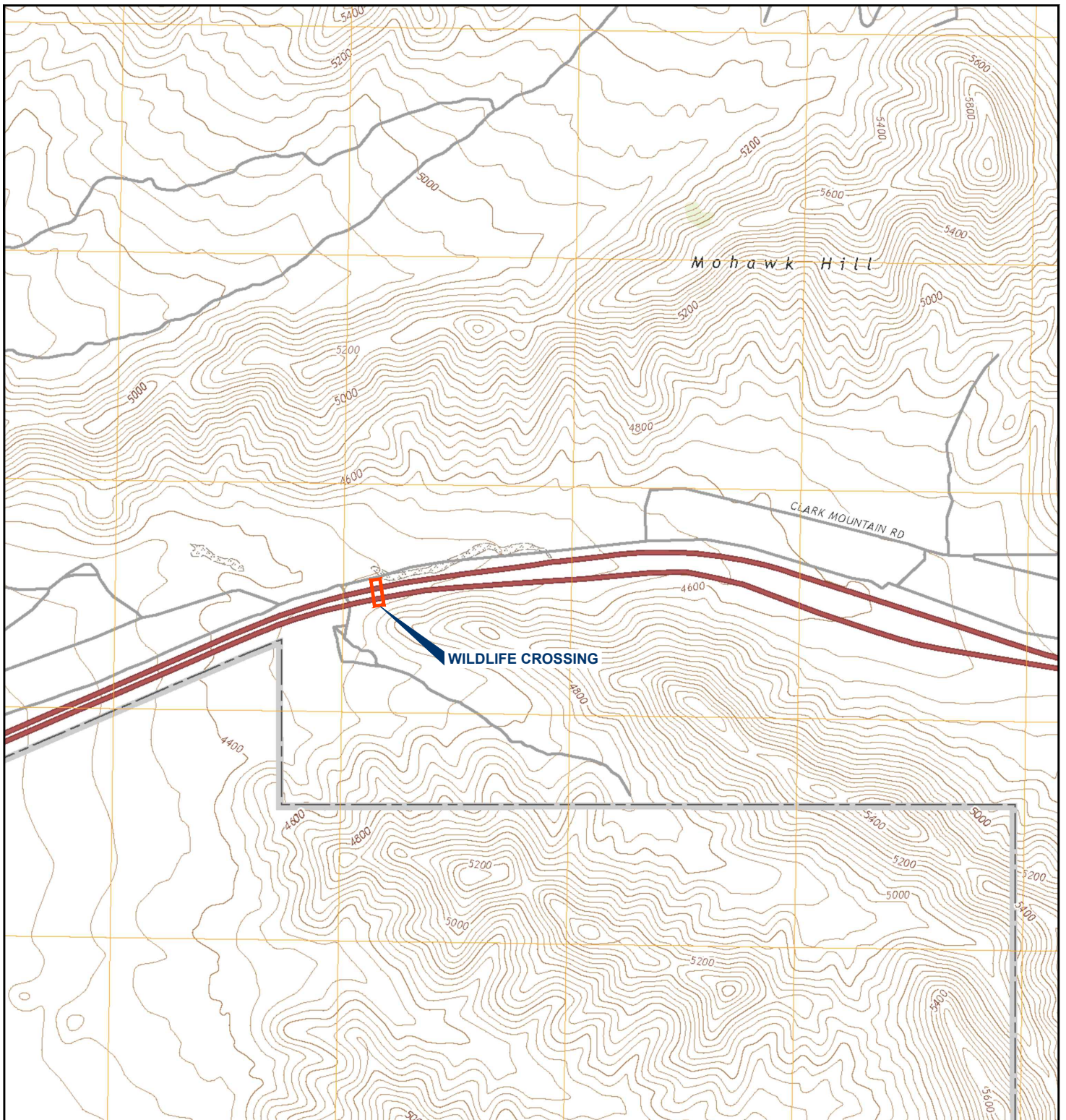
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FIGURES

211570003_SL.dwg (CLARK) 03/29/2023 JDP



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: USGS, 2018.

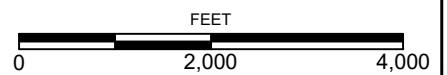
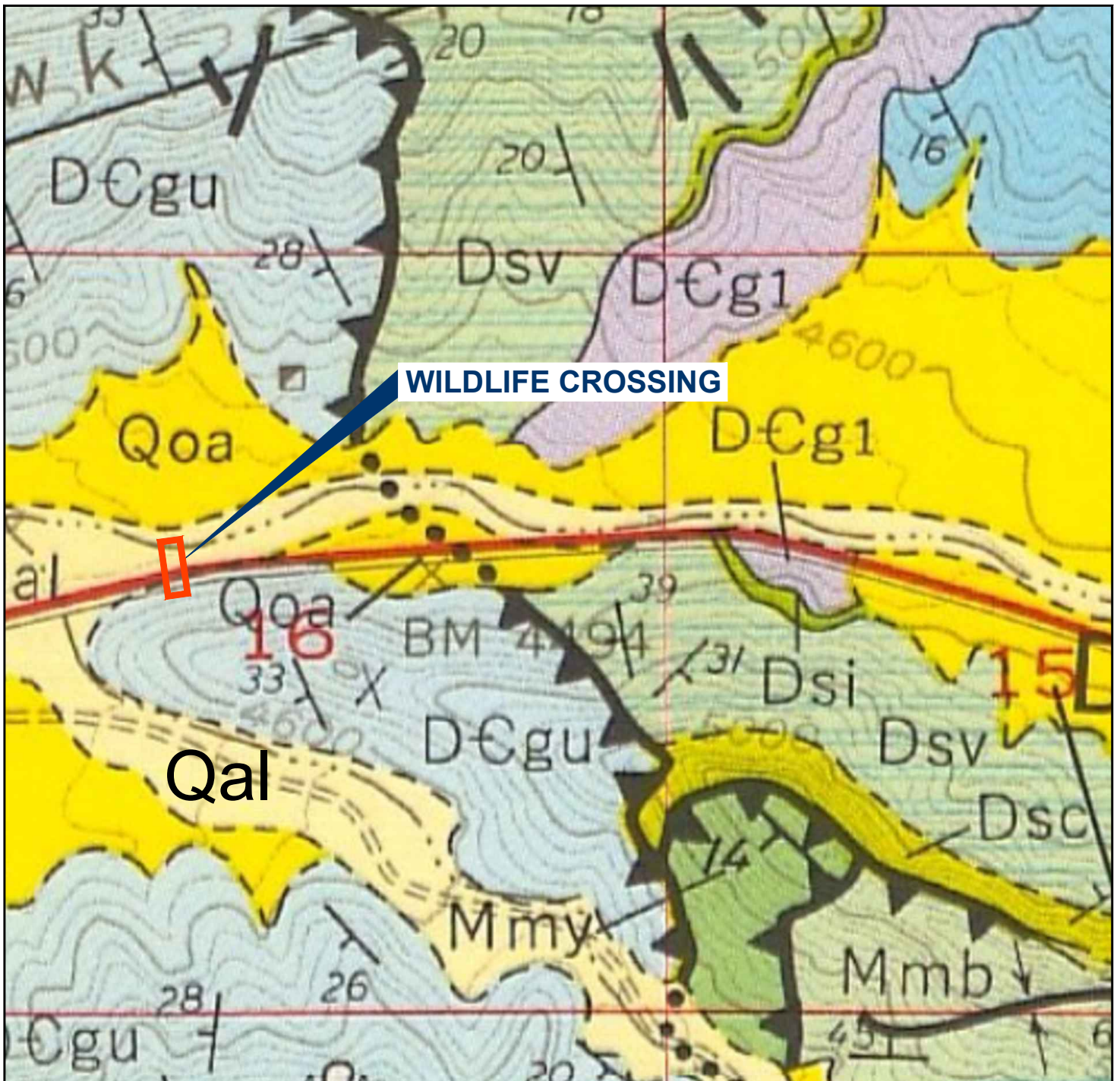


FIGURE 1



LEGEND

Qal	ALLUVIUM	—	WILDLIFE CROSSING
Qoa	OLDER ALLUVIUM	—	GEOLOGIC CONTACT
Ds	SULTAN LIMESTONE	- - -	FAULT; DASHED WHERE INFERRED, DOTTED WHERE CONCEALED
DCg	GOODSPRINGS DOLOMITE		

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. | REFERENCE: EVANS, 1971.

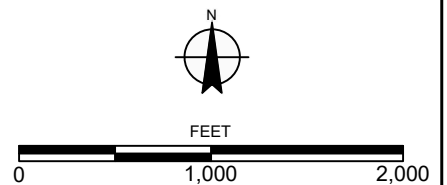


FIGURE 2

211570003_CKM_FL.mxd 3/31/2023 JDL

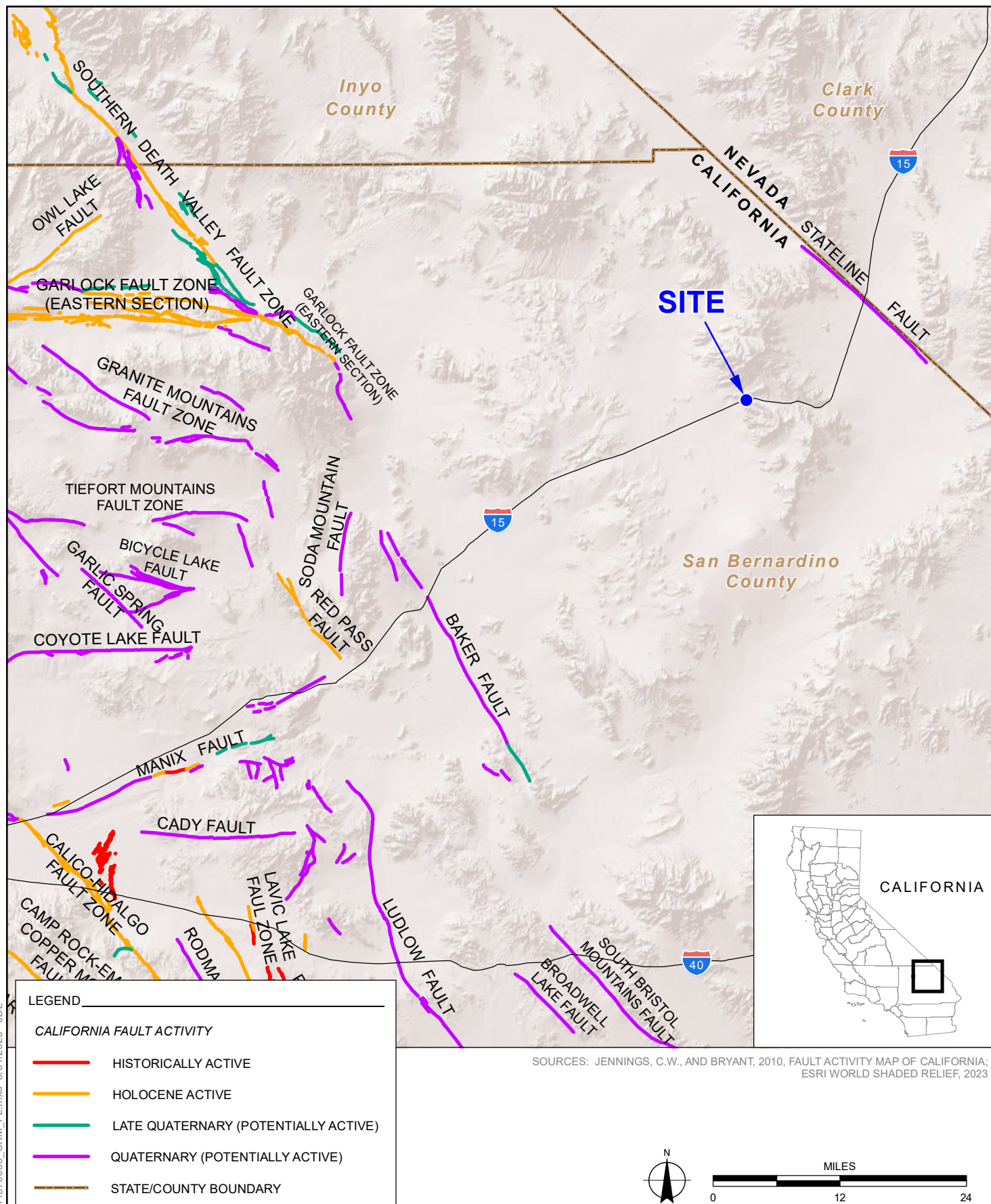
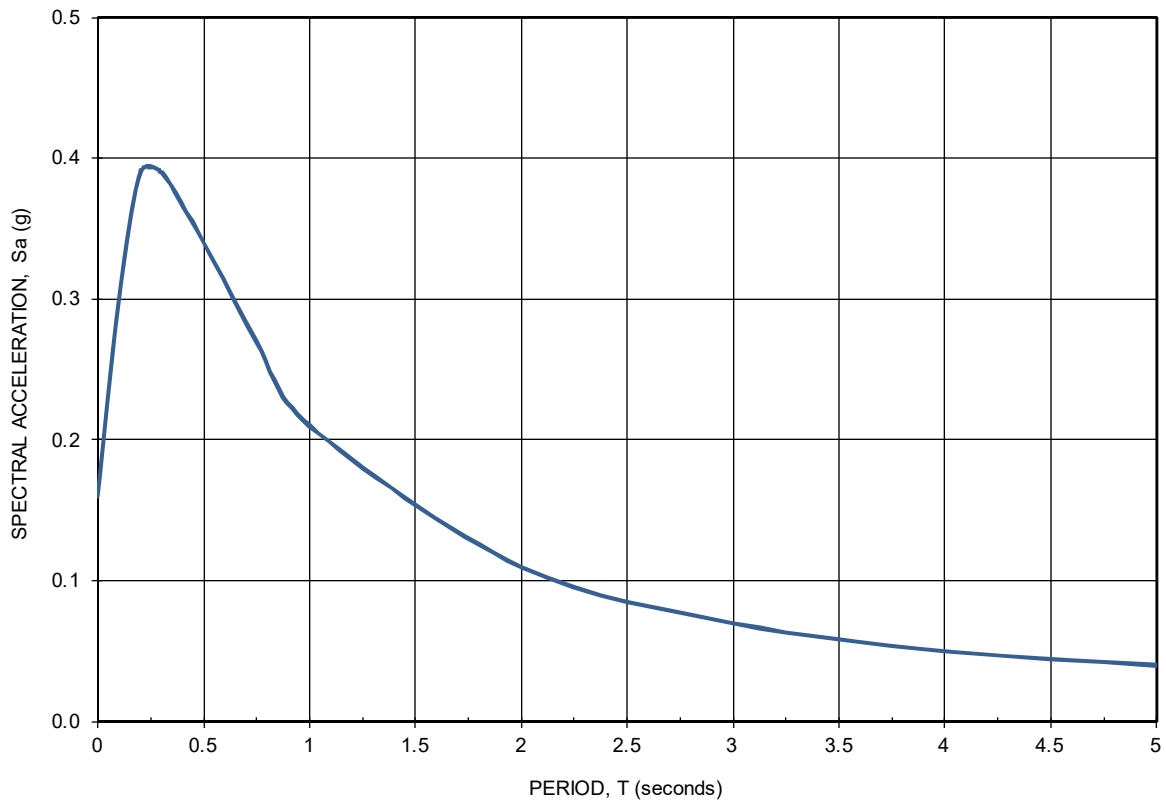


FIGURE 3

FAULT LOCATIONS

CLARK MOUNTAIN WILDLIFE CROSSING
BRIGHTLINE WEST HIGH-SPEED RAILWAY PROJECT
MOUNTAIN PASS, CALIFORNIA

PERIOD (seconds)	SPECTRAL ACCELERATION Sa (g)
PGA	0.16
0.10	0.30
0.20	0.39
0.30	0.39
0.50	0.34
0.75	0.27
1.00	0.21
2.00	0.11
3.00	0.07
4.00	0.05
5.00	0.04



NOTES:

1 SITE LATITUDE = 35.47392 DEGREES

SITE LONGITUDE = -115.58767 DEGREES

2 AVERAGE SHEAR WAVE VELOCITY IN THE UPPER 30 METERS (ASSUMED) = 352 METERS/SECOND

3 THE ACCELERATION RESPONSE SPECTRUM REPRESENTS THE UNITED STATES GEOLOGICAL SURVEY 5% IN 50 YEARS HAZARD (2014) AT 5% DAMPING.

4 THE ACCELERATION RESPONSE SPECTRUM INCLUDES NEAR-FAULT EFFECTS AND BASIN AMPLIFICATION EFFECTS.

5 PEAK GROUND ACCELERATION (PGA) = 0.16g

6 MEAN MOMENT MAGNITUDE (M) = 6.51

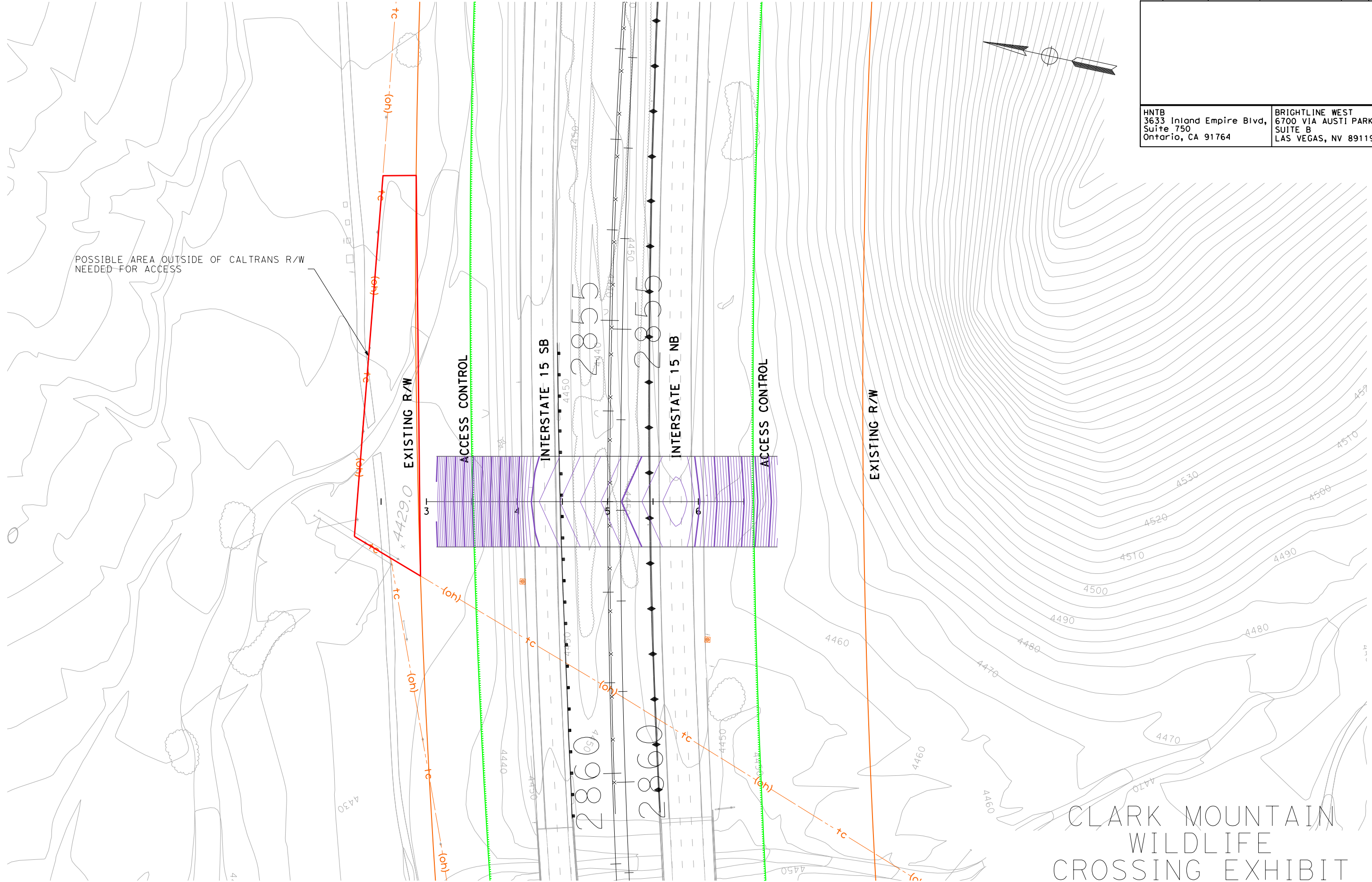
FIGURE 4



APPENDIX A

Conceptual Exhibits

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	51.83/186.1		
HNTB 3633 Inland Empire Blvd, Suite 750 Ontario, CA 91764			BRIGHTLINE WEST 6700 VIA AUSTI PARKWAY, SUITE B LAS VEGAS, NV 89119		



PLOT DRIVER => \$PLTDRVS
PEN TABLE => \$IP-SHORT-PEN-TABLE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®

BORDER LAST REVISED 7/2/2010

USERNAME => \$USER
DGN FILE => \$REQUEST

RELATIVE BORDER SCALE
15 IN INCHES

0 1 2 3

UNIT XXXX

PROJECT NUMBER & PHASE

XXXXXXXXXXXXXX

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00-00-00 | TIME PLOTTED => \$TIME

CONSULTANT FUNCTIONAL SUPERVISOR

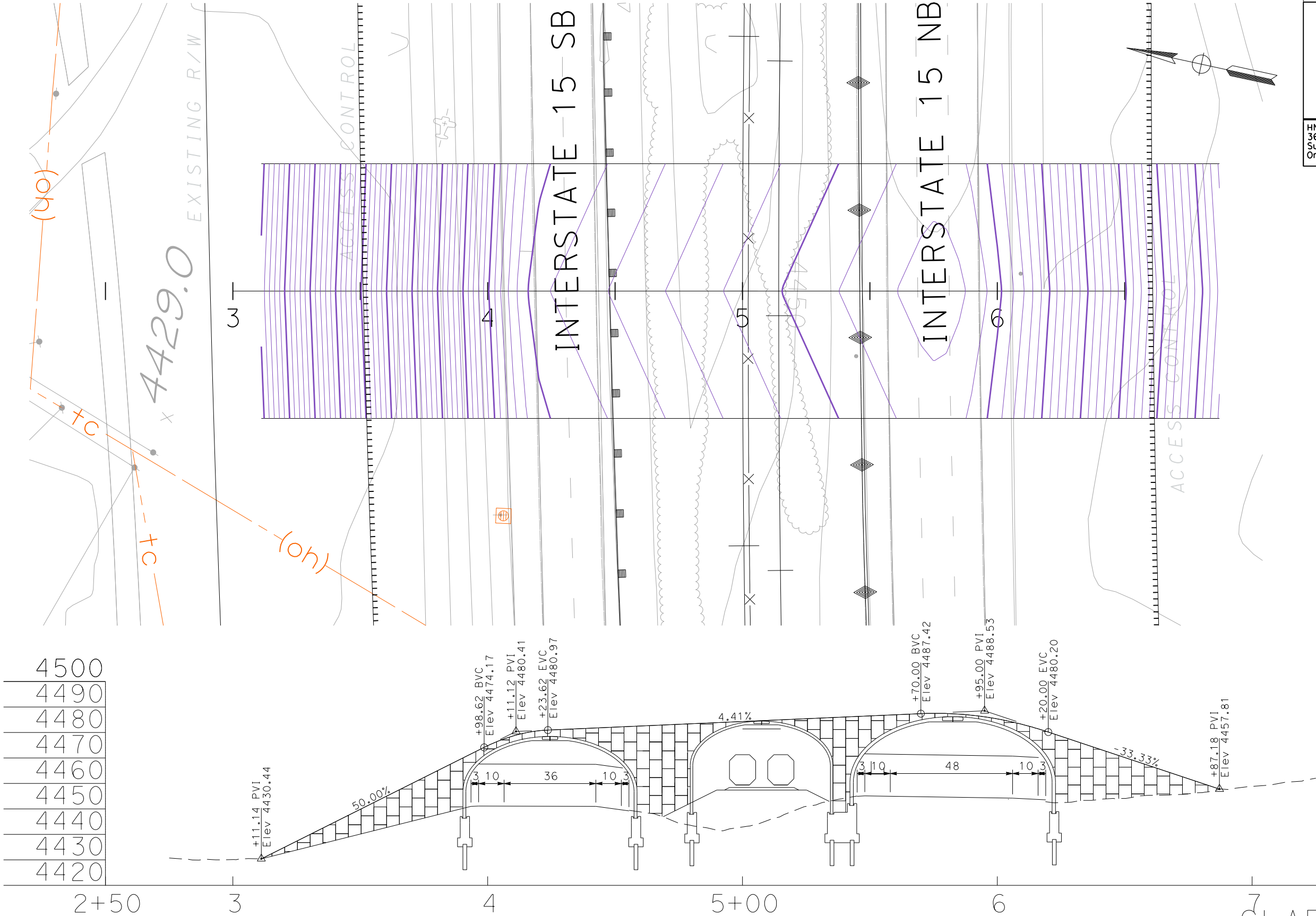
CALCULATED-DESIGNED BY

CHECKED BY

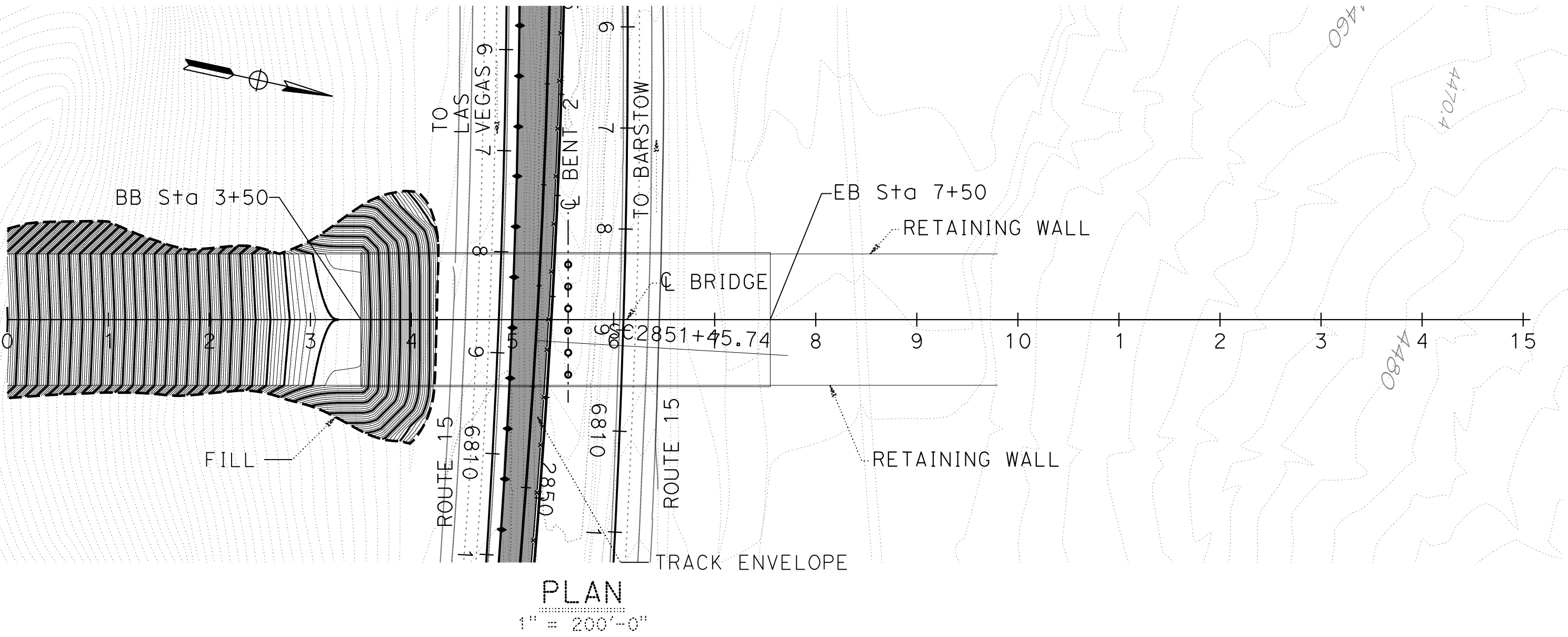
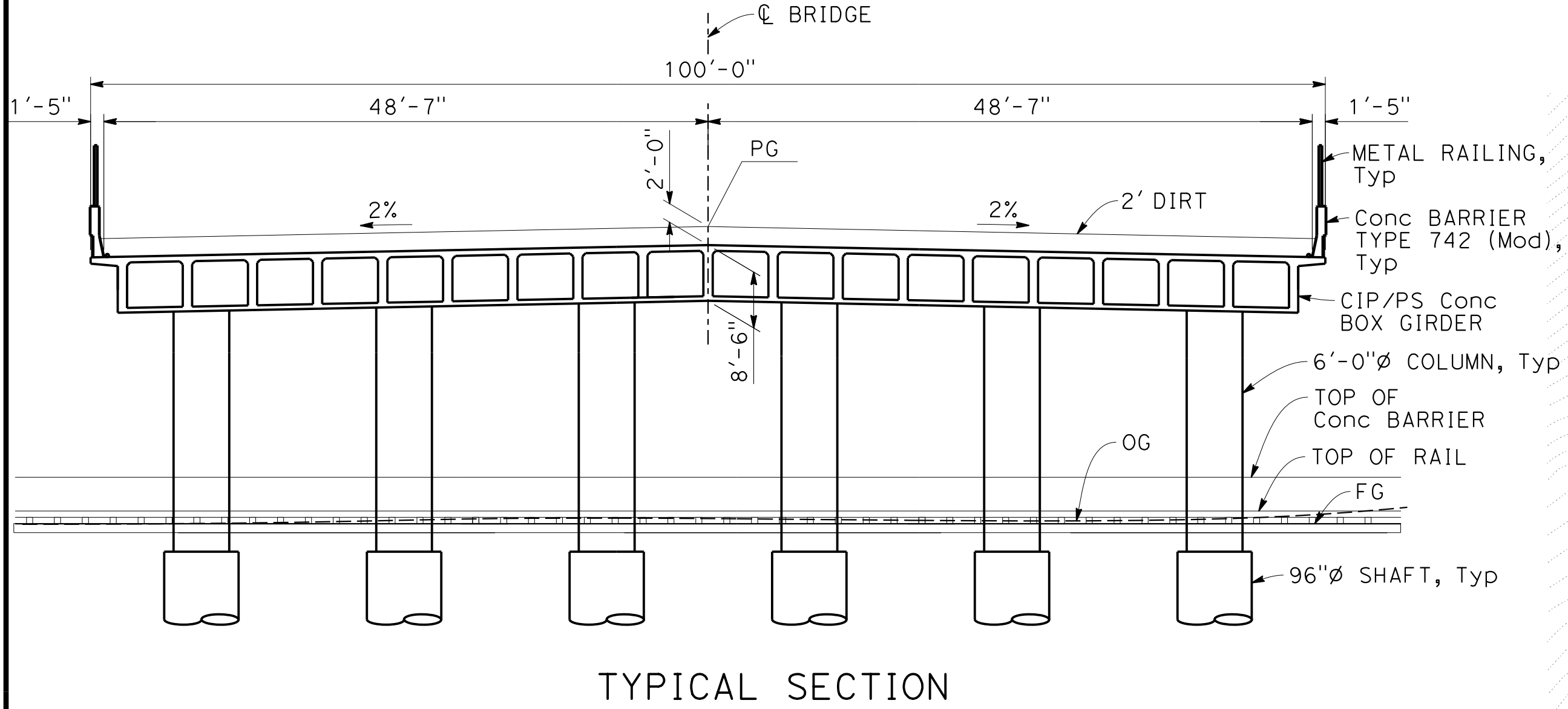
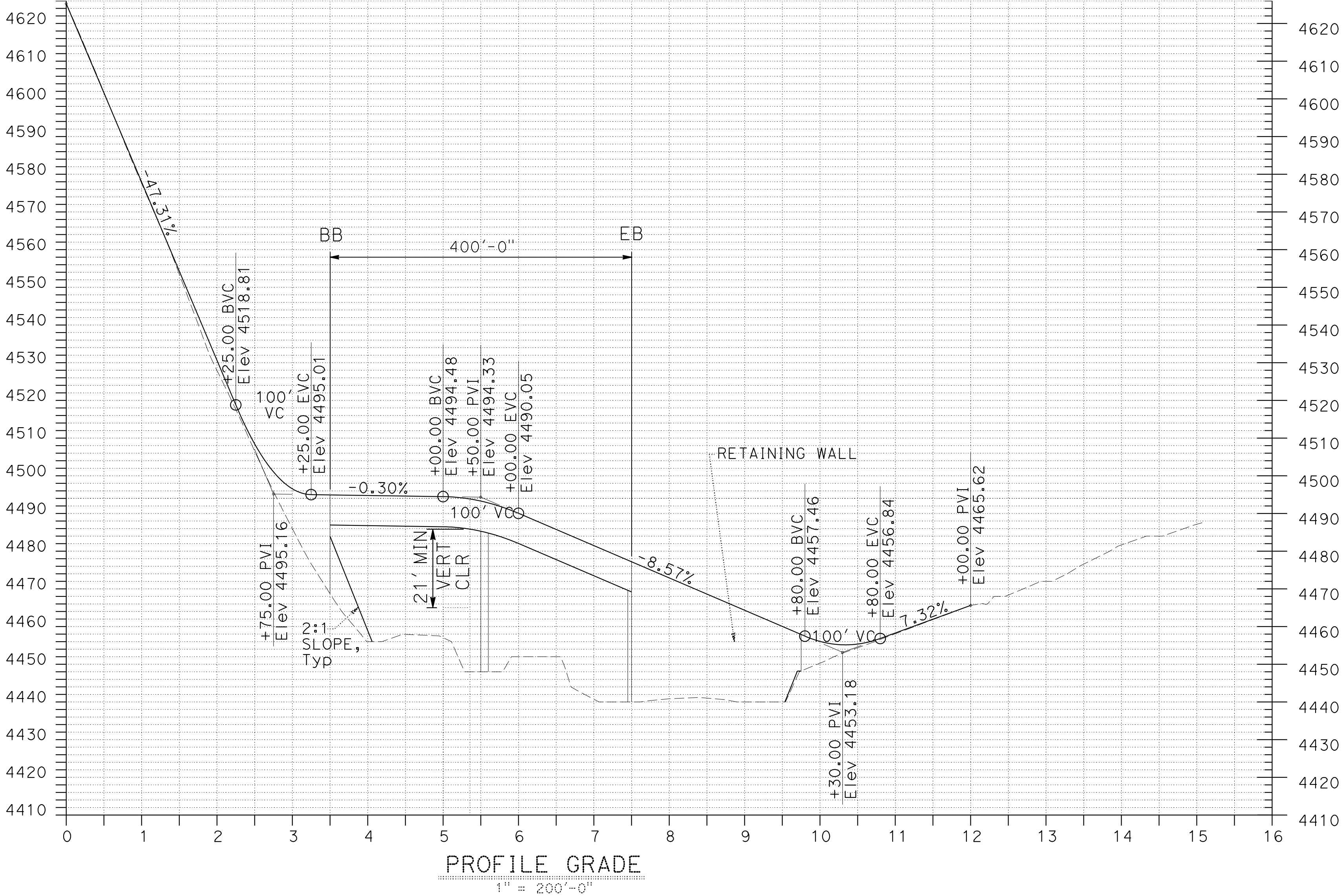
REVISOR BY

DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
08	SBd	15	51.83/186.1		
HNTB 3633 Inland Empire Blvd, Suite 750 Ontario, CA 91764			BRIGHTLINE WEST 6700 VIA AUSTI PARKWAY, SUITE B LAS VEGAS, NV 89119		



DRAFT - CONCEPT DESIGN

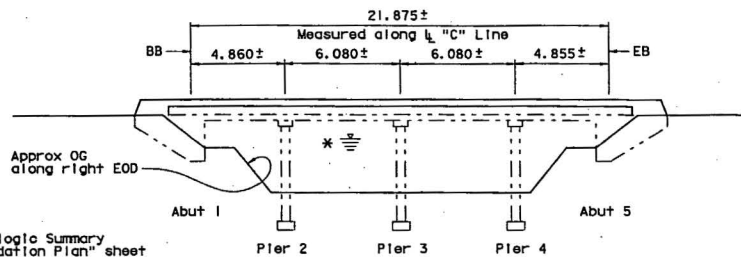


	DESIGN	BY	CHECKED	SEISMIC ANALYSIS	BY	CHECKED	PROJECT ENGINEER	BRIDGE No.	CLARK MOUNTAIN WILDLIFE CROSSING																										
DESIGN OVERSIGHT	DETAILS	BY	CHECKED	LAYOUT	BY	CHECKED		POST MILE	LOCATION NO. 2 PM R168.2																										
SIGN OFF DATE	QUANTITIES	BY	CHECKED	SPECIFICATIONS	BY	PLANS AND SPECS COMPARED																													
		X	X		X	X																													
STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)				DATE PLOTTED => 12-APR-2023 TIME PLOTTED => 11:36 FILE => Animal_Crossing-EXHIBIT-2.dgn USERNAME => lizhang				ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				0	1	2	3	PROJECT NUMBER & PHASE:				COUNTY/ROUTE: CONTRACT No.:				DISREGARD PRINTS BEARING EARLIER REVISION DATES				REVISION DATES		SHEET	OF				



APPENDIX B

As-Built Plans (Clark Mountain Ditch Bridge)



* For Hydrologic Summary
see "Foundation Plan" sheet

Datum Elev 1347.000

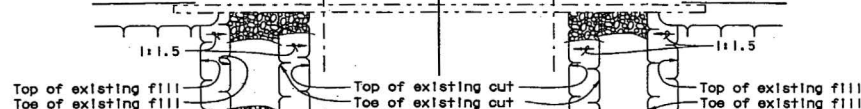
ELEVATION

1:250



Existing Clark Mountain
Ditch, Left Bridge,
Bridge No. 54-0304L

Clark Mountain
Ditch
S15°09'32"E±



Curve Data
L "D" Line
R=3047.135
Δ=19°20'36"
T=519.305
L=1028.727

PLAN

1:125

NOTE:
THE CONTRACTOR SHALL VERIFY ALL
CONTROLLING FIELD DIMENSIONS
BEFORE ORDERING OR FABRICATING
ANY MATERIAL.

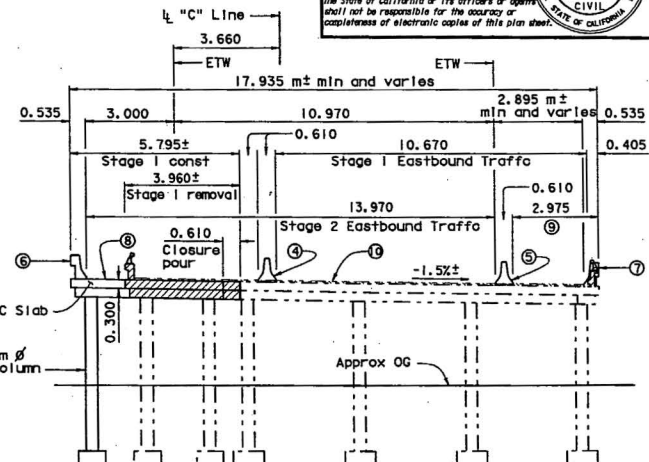


DIST	COUNTY	ROUTE	KILOMETER POST	SHEET TOTAL
08	SBd	15		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

The State of California or its officers or agents
shall not be responsible for the accuracy or
completeness of electronic copies of this plan sheet.



TYPICAL SECTION

1:80

INDEX TO PLANS

SHEET NO.	TITLE
1.	GENERAL PLAN
2.	FOUNDATION PLAN
3.	ABUTMENT 1 LAYOUT
4.	ABUTMENT 7 LAYOUT
5.	ABUTMENT DETAILS NO. 1
6.	BENT DETAILS NO. 1
7.	TYPICAL SECTION
8.	LOG OF TEST BORINGS 1 OF 1

STANDARD PLANS JULY 1999

BO-1	BRIDGE DETAILS
BO-3	BRIDGE DETAILS
BO-5	BRIDGE DETAILS
BI1-53	CONCRETE BARRIER TYPE 25

STANDARD PLAN SHEET NO.

DETAIL NO.

ALL DIMENSIONS ARE IN
METERS UNLESS OTHERWISE SHOWN

NOTES:

- Paint "Br No. 54-0304R"
 - Paint "Clark Mountain Ditch Bridge"
 - Metal Beam Guard Rail, see "Road Plans"
 - Temporary railing Type K see "Road Plans" (Stage 1)
 - Temporary railing Type K see "Road Plans" (Stage 2)
 - Concrete Barrier Type 25
 - Concrete Barrier Type 25 (mod)
 - Match existing grade and cross slope
 - Stage 2 const remove Type 1 Barrier Railing
 - 37 mm ± of existing AC to be removed see "Road Plans"
 - Denotes existing structure
 - Denotes limits of removal of existing Barrier Railing Type 1 and portion of existing bridge deck
 - Denotes existing rock slope protection
- For General Notes and Pile Data see
"Foundation Plan" sheet
- BB and EB elevations are with respect to
original As-Built elevations

STATE OF
CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN 17

BRIDGE NO.
54-0304R
KILOMETER POST
270.36

CLARK MOUNTAIN DITCH (WIDEN)

GENERAL PLAN

DESIGN	BY C. Udarbe	CHECKED 9-00	LOAD FACTOR	DESIGN	BY	CHECKED	LIVE LOADING	HSD-44 AND ALTERNATIVE AND PERMIT DESIGN LOAD
DETAILS	BY B. Robinson	CHECKED 9-00	LAYOUT	BY	CHECKED			
QUANTITIES	BY	CHECKED	SPECIFICATIONS	BY	CHECKED			

DESIGN ENGINEER

STRUCTURES DESIGN GENERAL PLAN SHEET (METRIC) (REV. 4/20/00)

ORIGINAL SCALE IN MILLIMETERS
FOR REDUCED PLANS

CU 08221
EA 439301

FILE → acq00113143730

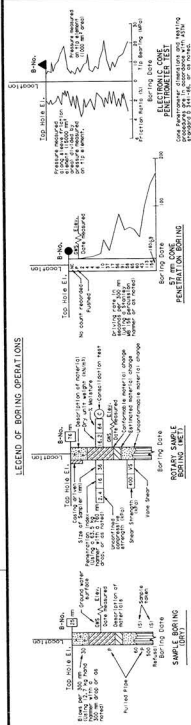
3 STANDARD PRINTS BEARING
EARLIER REVISION DATES

REVISION DATES (PRECEDENCE STATE ONLY)

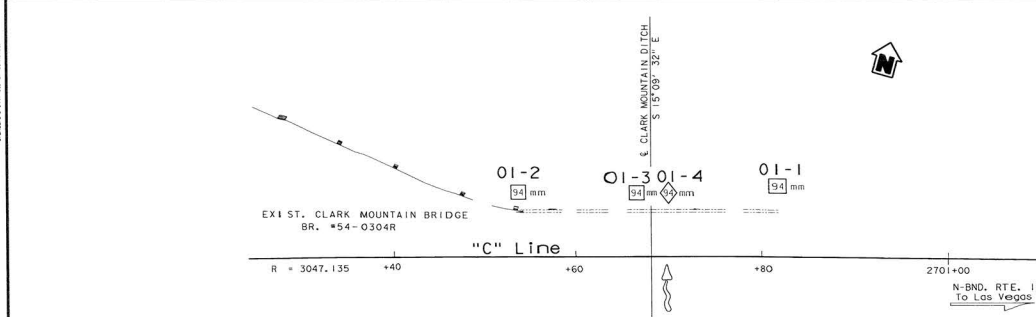
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USER → b708 (bms)



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Joseph S. Pratt			7-12-01		
REGISTERED ENGINEERING GEOLOGIST			No. 2143		
EXP. 5-31-03			REGISTERED GEOLOGIST		
PLANS APPROVAL DATE			The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.		



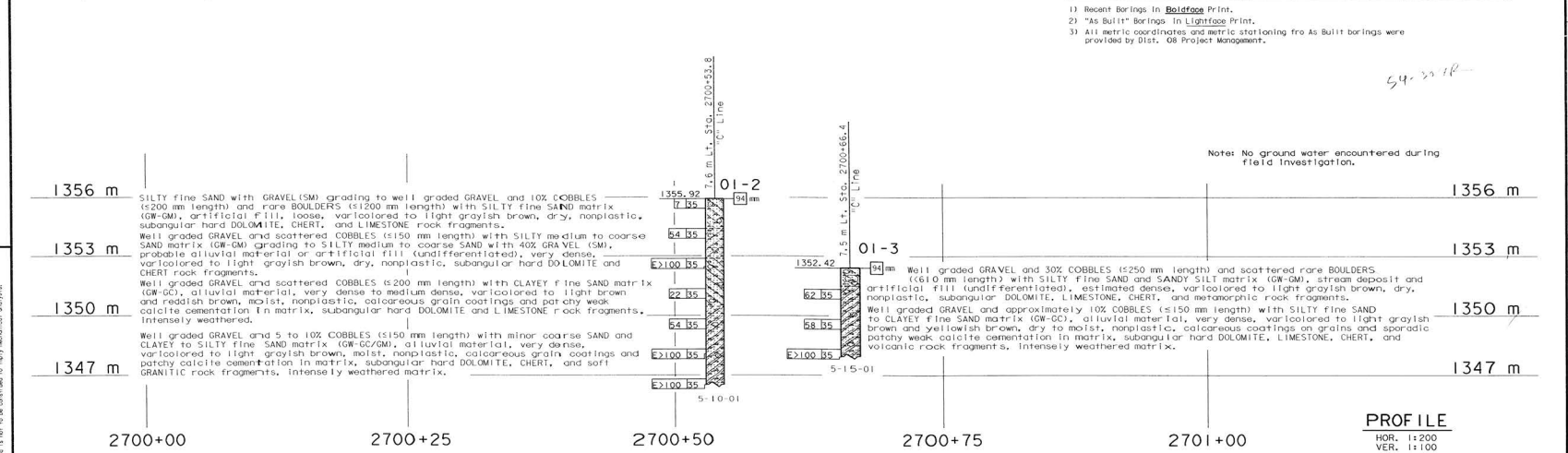
LEGEND OF EARTH MATERIALS	
CLAYEY SILT	CLAYEY SAND
SILT	SAND
GRAVEL	COBBLES
DOLOMITE	CHERT
LIMESTONE	METAMORPHIC ROCK
ARTIFICIAL FILL	UNDIFFERENTIATED
WELL GRADED GRAVEL	POORLY GRADED GRAVEL
WELL GRADED SAND	POORLY GRADED SAND
WELL GRADED SILT	POORLY GRADED SILT
WELL GRADED CLAY	POORLY GRADED CLAY
WELL GRADED DOLOMITE	POORLY GRADED DOLOMITE
WELL GRADED CHERT	POORLY GRADED CHERT
WELL GRADED LIMESTONE	POORLY GRADED LIMESTONE
WELL GRADED METAMORPHIC ROCK	POORLY GRADED METAMORPHIC ROCK
WELL GRADED ARTIFICIAL FILL	POORLY GRADED ARTIFICIAL FILL
WELL GRADED UNDIFFERENTIATED	POORLY GRADED UNDIFFERENTIATED



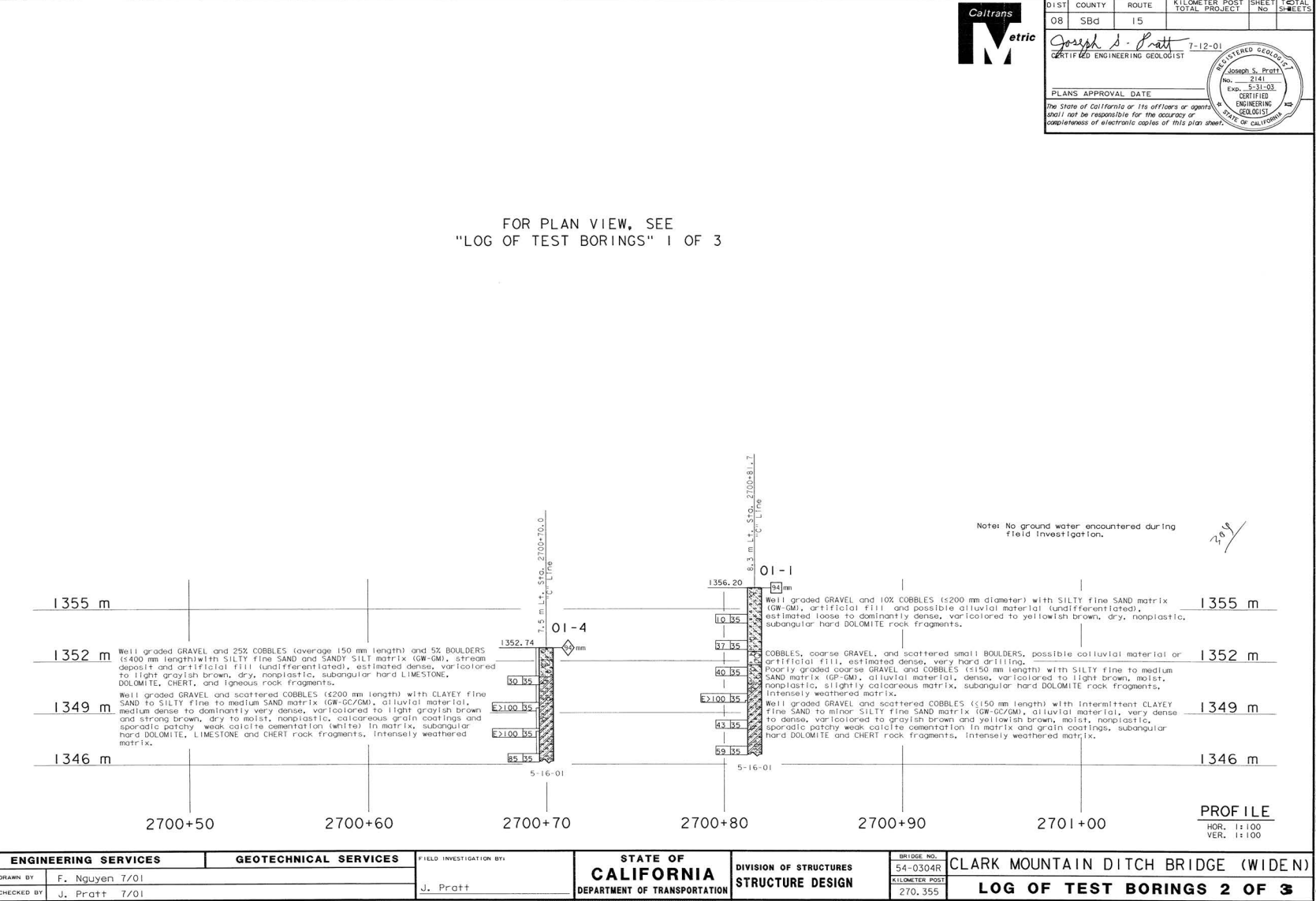
BENCH MARK
BM WP#8-67 Elev. 1355.64 m
Found aerial target on asphalt right shoulder of Northbound Rte. 15, approx. 9.168 m Rt. Sta. 2700+31.293 "C" Line.
Metric Coordinates:
N 721,526,205
E 2,218,977,220

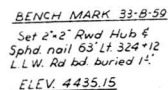
NOTES:
1. Datums on which recent plans are based include NAD '83 (Horizontal) and NAD '29 (Vertical).
2. As built top of boring elevations (English units, based on the NAD '29 (Vertical) datum also) are converted to metric units by dividing As Built elevations by the standard conversion factor 3.2808. No other adjustments are necessary to correct elevations on As Built plans.

BORING NO.		OLD BORING LOCATION (STANDARD ENGLISH STATIONING)	BORING LOCATION OFFSET FROM "C" LINE (METRIC STATIONING)	METRIC COORDINATES:	
				NORTHING	EASTING
01-1			8.3 m Lt. Sta. 2700+81.7	N721556.4347	E2218821.2914
01-2			7.6 m Lt. Sta. 2700+53.8	N721548.4426	E2218794.4757
01-3			7.5 m Lt. Sta. 2700+66.4	N721551.6805	E2218806.6852
01-4			7.5 m Lt. Sta. 2700+70.0	N721552.6240	E2218810.1685
B-1 (57-0304R/L)		61 ft Rt. Sta. 322+57 L.O.L. East Roadway	18.5930 m Rt. Sta. 2700+54.70	N721523.4328	E2218802.3046
B-2 (57-0304R/L)		32 ft Rt. Sta. 323+54 L.O.L. East Roadway	9.7537 m Rt. Sta. 2700+84.26	N721539.6460	E2218828.3994
B-3 (57-0304R/L)		54 ft Rt. Sta. 323+33 L.O.L. West Roadway	16.4594 m Rt. Sta. 2700+77.86	N721566.6367	E2218808.8611
B-4 (57-0304R/L)		17 ft Lt. Sta. 323+38 L.O.L. West Roadway	5.1817 m Lt. Sta. 2700+79.39	N721587.8699	E2218804.4088
B-5 (57-0304R/L)		17 ft Lt. Sta. 322+97 L.O.L. West Roadway	5.1817 m Lt. Sta. 2700+66.89	N721584.4223	E2218792.3716

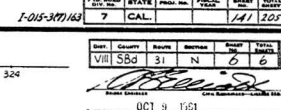


ENGINEERING SERVICES DRAWN BY: F. Nguyen 7/01, I.G-Remmen 7/01 CHECKED BY: J. Pratt 7/01	GEOTECHNICAL SERVICES FIELD INVESTIGATION BY: J. Pratt	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF STRUCTURES STRUCTURE DESIGN	BRIDGE NO. 54-0304R KILOMETER POST 270.355	CLARK MOUNTAIN DITCH BRIDGE (WIDE) LOG OF TEST BORINGS 1 OF 3
---	--	--	---	---	--





Except for ① & ②, material agreed with Log.
Plan dimensions & elevations used.



At the bent footings, material at plan elevation was loose until solidated backfill which had been dumped around timber pike of old bridge. Material was removed to approx. 4.425'; an aggregate base material was backfilled to 51.4431'.

DIVISION OF ENGINEERING SERVICES - OFFICE OF GEOTECHNICAL SERVICE

An "As-Built" Log Test Borings shall be considered an informational document only, as the State of California registration seal with signature, license number and registration expiration date must appear on all documents that this is a true and accurate copy of the original. It does not attest to the accuracy or validity of the information contained herein nor certify its truthfulness. This document is available and presented only for the convenience of any bidder, contractor or other interested party.

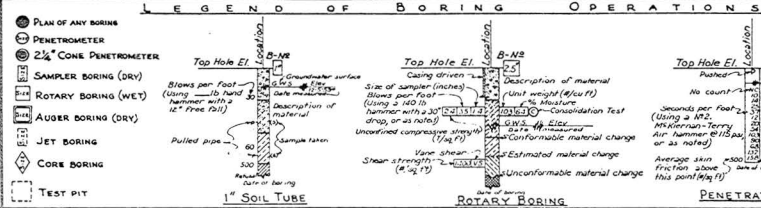
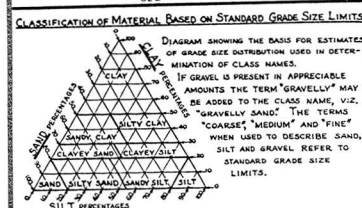
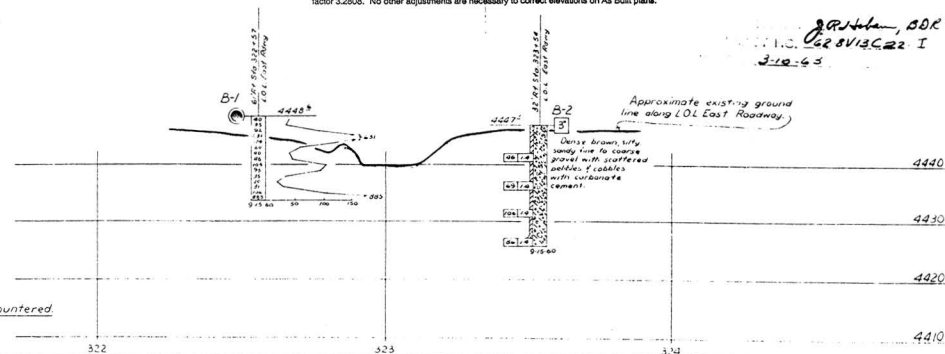
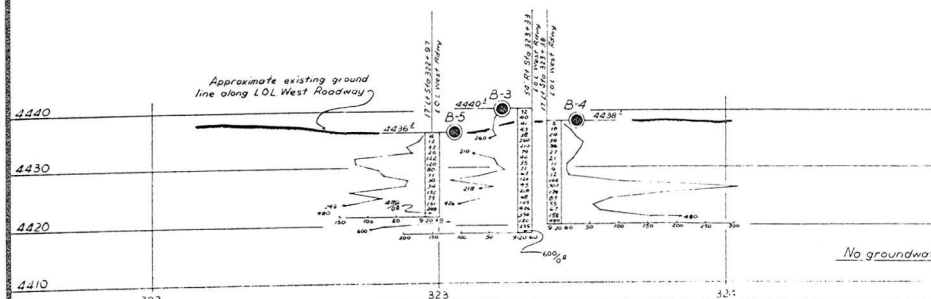
DIST.	COUNTY	ROUTE	KILOMETER POST	TOTAL PROJECT	Date
08 <td>SBB</td> <td>15 <td></td> <td></td> <td>7-12-01</td> </td>	SBB	15 <td></td> <td></td> <td>7-12-01</td>			7-12-01


 CLARK MOUNTAIN DITCH BRIDGE (WIDEN)
 LOG OF TEST BORINGS 3 OF 3

DATE	ACQUP OF THE INFORMATION AT OFFICE OF STRUCTURE MAINTENANCE AND CONSTRUCTION	CUS OR	REVISION
		CSU 08	original

Notes:

1. See Table on Log of Test Borings sheet 1 of 3 for Metric Stationing and boring coordinates
2. As Built top of boring elevations [English units, based on the NAD '29 (Vertical) datum] are converted to metric units by dividing As Built elevations by the standard conversion factor 3.2808. No other adjustments are necessary to correct elevations on As Built plans



NOTES

The contractor's attention is directed to Section 2, Article (c) of the Standard Specifications and to the Special Provisions accompanying this set of plans.

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

CLARK MOUNTAIN DITCH

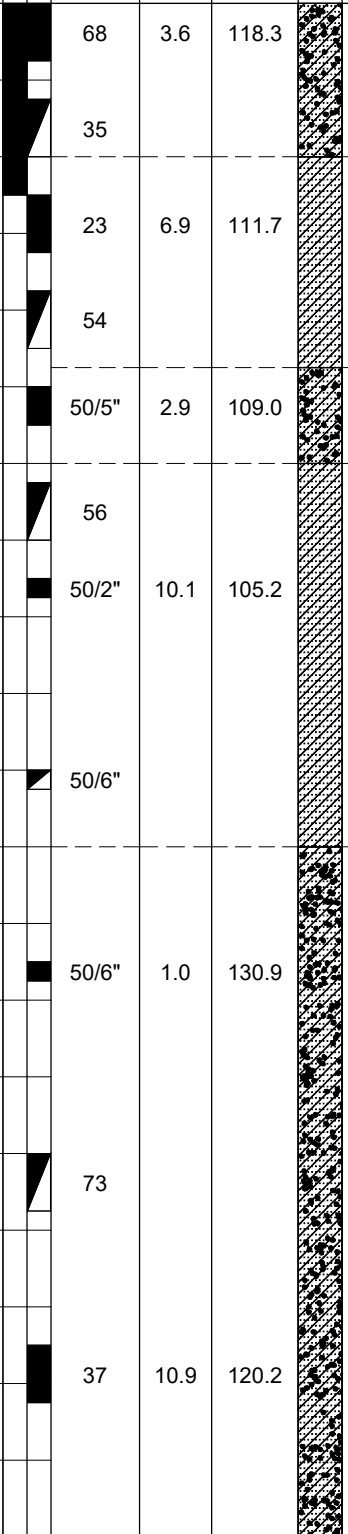
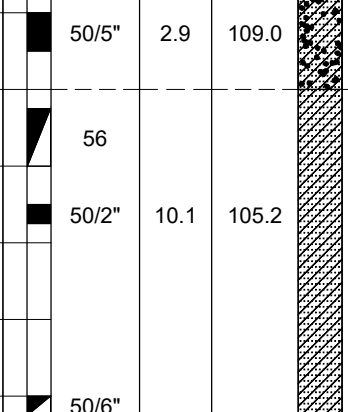
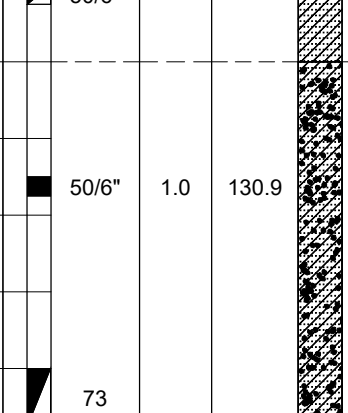
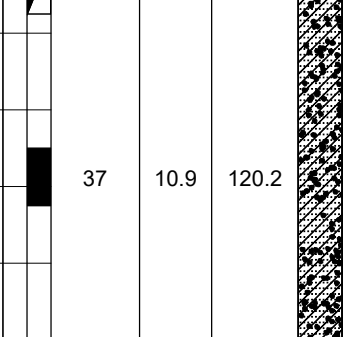
LOG OF TEST BORINGS

SCALE	BRIDGE	FILE	DRAWING
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APPENDIX C

Previous Ninyo & Moore Boring Logs and Laboratory Testing

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED	12/8/20	BORING NO.	R-20-144			
	Bulk	Driven						GROUND ELEVATION	4,448' ± (MSL)	SHEET	1	OF	2	
									METHOD OF DRILLING			8" Hollow-Stem Auger (Baja Exploration)		
									DRIVE WEIGHT	140 lbs. (Auto. Trip Hammer)	DROP	30"		
									SAMPLED BY	KMB	LOGGED BY	KMB	REVIEWED BY	SG
									DESCRIPTION/INTERPRETATION					
0			68	3.6	118.3		GP-GC	ALLUVIUM: Poorly graded GRAVEL with CLAY (GP-GC); very dense; light brown to gray; moist. @ 2.5': Dense; decrease in GRAVEL content.						
			35				SC	CLAYEY SAND (SC); medium dense; mottled brown to light brown; moist; trace GRAVEL.						
			23	6.9	111.7									
			54											
10			50/5"	2.9	109.0		GP-GC	Poorly graded GRAVEL with CLAY (GP-GC); very dense; light brown; moist.						
			56				SC	CLAYEY SAND (SC); very dense; mottled brown and light brown; moist; 46% SAND; 40% fines; 14% GRAVEL.						
			50/2"	10.1	105.2			Caliche.						
								Light brown to brown.						
20			50/6"				GP-GC	Poorly graded GRAVEL with CLAY (GP-GC); very dense; brown; dry.						
			50/6"	1.0	130.9									
			73											
			37	10.9	120.2			Dense; moist.						
40														

APPENDIX A

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 12/8/20 BORING NO. R-20-144	
	Bulk	Driven						GROUND ELEVATION 4,448' ± (MSL)	SHEET 2 OF 2
METHOD OF DRILLING 8" Hollow-Stem Auger (Baja Exploration)									
DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"									
SAMPLED BY KMB LOGGED BY KMB REVIEWED BY SG									
DESCRIPTION/INTERPRETATION									
40			85				GC	ALLUVIUM: (Continued) CLAYEY GRAVEL (GC); very dense; brown; moist.	
							SC	CLAYEY SAND with GRAVEL (SC); very dense; brown; moist.	
			50/4"						
50			50/2"						
			50/1"						
			50/1"					No recovery. Total Depth = 56.1 feet. Groundwater was not encountered during drilling. Backfilled with bentonite grout and on-site soil on 12/8/20.	
60								Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents. Apparent density is estimated based on the field blow counts. This Boring Record was prepared in accordance with Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010).	
70									
80									

APPENDIX A

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 12/11/20 BORING NO. R-20-146	
	Bulk	Driven						GROUND ELEVATION 4,450' ± (MSL)	SHEET 1 OF 3
METHOD OF DRILLING 8" Hollow-Stem Auger (Baja Exploration)									
DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"									
SAMPLED BY GM LOGGED BY GM REVIEWED BY SG									
DESCRIPTION/INTERPRETATION									
0			51				SC-SM	ALLUVIUM: SILTY CLAYEY SAND with GRAVEL (SC-SM); very dense; yellowish brown; dry; few COBBLES; possible BOULDERS.	
			91	1.6	132.7			54% SAND; 29% GRAVEL; 16% fines.	
			64						
			50/2"						
10			40					Dense.	
			69					Very dense.	
			16				SM	SILTY SAND with GRAVEL (SM); medium dense; yellowish brown to reddish brown; dry.	
20			95/10"	1.7	135.3		SC	CLAYEY SAND with GRAVEL (SC); very dense; yellowish brown; dry; some caliche.	
			70				SM	SILTY SAND with GRAVEL (SM); very dense; yellowish brown; moist.	
30			50/5"	3.3				Possible BOULDER.	
			83/8"				SC	CLAYEY SAND with GRAVEL (SC); very dense; yellowish brown; moist.	
40									

APPENDIX A

DEPTH (feet)	SAMPLES		BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED 12/11/20 BORING NO. R-20-146	
	Bulk	Driven						GROUND ELEVATION 4,450' ± (MSL)	SHEET 2 OF 3
METHOD OF DRILLING 8" Hollow-Stem Auger (Baja Exploration)									
DRIVE WEIGHT 140 lbs. (Auto. Trip Hammer) DROP 30"									
SAMPLED BY GM LOGGED BY GM REVIEWED BY SG									
DESCRIPTION/INTERPRETATION									
40			50/2"	3.3	117.3		GC	ALLUVIUM: (Continued) CLAYEY GRAVEL with SAND (GC); very dense; yellowish brown; moist.	
							SC	CLAYEY SAND with GRAVEL (SC); very dense; yellowish brown; moist; with caliche.	
			55						
50			50/4"						
			47					Dense.	
60			96/8"				SM	SILTY SAND with GRAVEL (SM); very dense; yellowish brown; moist.	
			50/6"						
70			50/2"						
			50/5"						
								Total Depth = 75.4 feet. Groundwater was not encountered during drilling. Backfilled with cement-bentonite grout on 12/11/20.	
								Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due	
80									

APPENDIX A

120

SAMPLE LOCATION	SAMPLE DEPTH (ft)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
R-20-144	12.5-14.0	Clayey SAND	86	40	SC

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

FIGURE B-1-47



NO. 200 SIEVE ANALYSIS TEST RESULTS
BRIGHTLINE WEST HIGH-SPEED RAILWAY PROJECT, NORTH SEGMENT
BARSTOW, CA TO CA-NV STATELINE

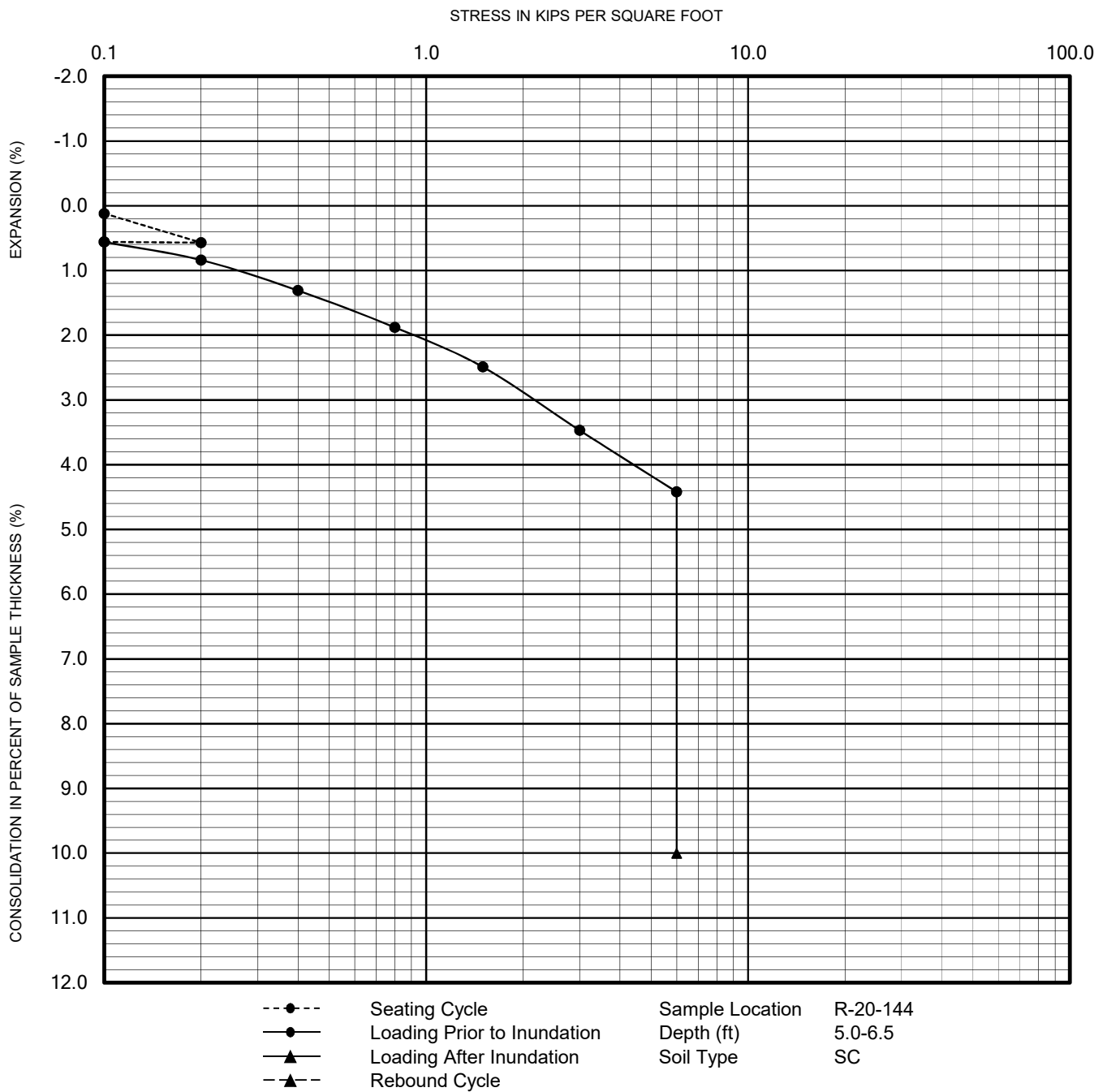
SAMPLE LOCATION	SAMPLE DEPTH (ft)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
R-20-146	5.0-6.5	Silty Clayey SAND with Gravel	71	16	SC-SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

FIGURE B-1-48



NO. 200 SIEVE ANALYSIS TEST RESULTS
BRIGHTLINE WEST HIGH-SPEED RAILWAY PROJECT, NORTH SEGMENT
BARSTOW, CA TO CA-NV STATELINE



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2435

FIGURE B-5-15

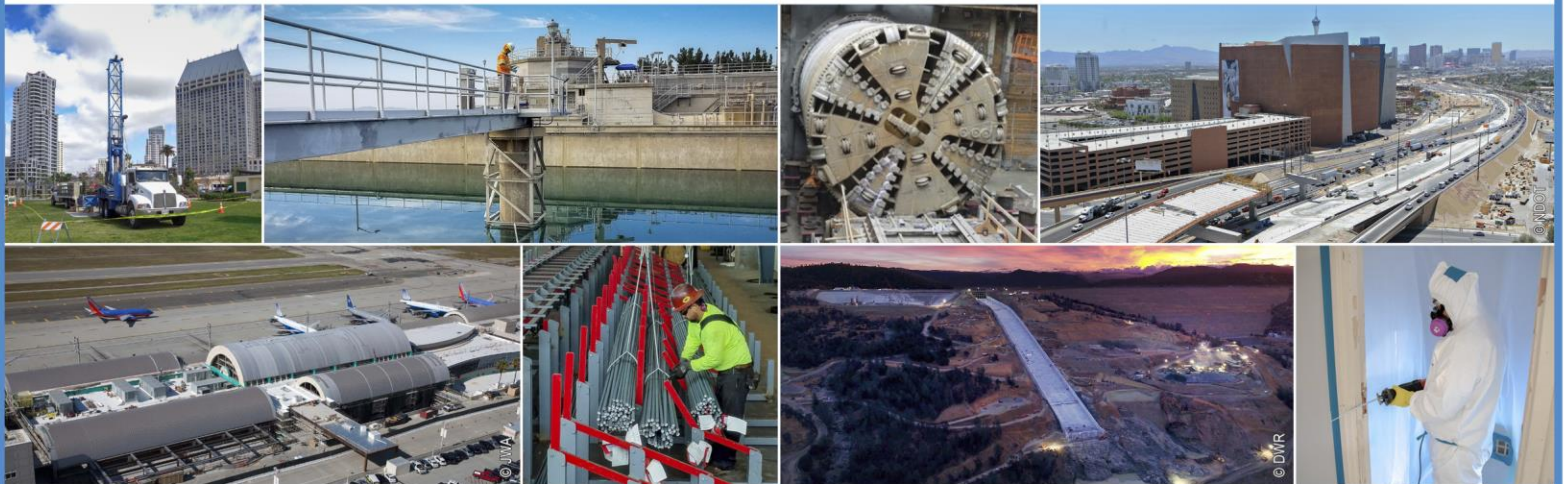
SAMPLE LOCATION	SAMPLE DEPTH (ft)	pH ¹	RESISTIVITY ¹ (ohm-cm)	SULFATE CONTENT ²		CHLORIDE CONTENT ³ (ppm)
				(ppm)	(%)	
R-20-146	2.5-4.0	8.6	924	40	0.004	155

¹ PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643

² PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417

³ PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422

FIGURE B-9-48



475 Goddard, Suite 200 | Irvine, California 92618 | p. 949.753.7070

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

ninyoandmoore.com

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

Attachment R

VALUE ANALYSIS STUDY SUMMARY REPORT



Final Value Analysis Study Report



EA 1N950 D-8 I-15 Mojave Wildlife Crossings Project

EA 1N590; PN 0823000021

8-SBd-15 (R114.0/R171.5)

Contract No. 53A0248

Task Order No. 1390



April 2024

***Prepared by
Value Management Strategies, Inc.***





Date: April 5, 2024

To: Nivine Georges, District 8 DVAC

Subject: Final VA Study Report
EA 1N950 D-8 I-15 Mojave Wildlife Crossings Project (T.O 1390)

Dear Ms. Georges,

Value Management Strategies, Inc. is pleased to submit this Final VA Study Report for the referenced project. This report summarizes the results and events of the virtual study conducted September 18-21, 2023, and the implementation meeting on February 12, 2024, using the Webex virtual meeting platform for District 8, California

It was a pleasure working with District 8 on this project, and I look forward to the next one. If you have any questions or comments concerning this final report, please do not hesitate to contact me at eric.trimble@vms-inc.com.

Sincerely,

Value Management Strategies, Inc.

A handwritten signature in blue ink, appearing to read "Eric Trimble", is positioned below the typed name.

Eric Trimble, CVS, MBA, PMP, ENV SP
VP (Value Engineering)
VA Study Team Leader

Copy: (PDF) Addressee
(PDF) Jarek Kusz, Office of Innovative Design and Delivery
(PDF) Erika Barrick, HQ VA Program Administrator

VA STUDY SUMMARY REPORT..... 1

Project Summary
VA Study Timing
Project Purpose and Need
VA Study Objectives
Key Project Issues
Evaluation of Baseline Concept
 • Performance Attributes
Final VA Study Results
VA Team

VA ALTERNATIVES 7

Proposed VA Alternatives
Other Considerations
Alignment with Safe System Objectives
Summary of Performance Improvements
 • Proposed
 • Accepted
VA Alternative Implementation Action
Recommendation Forms
VA Alternative Documentation

PROJECT INFORMATION30

Background
Project Description
Project Design Exceptions
Information Provided to the VA Team
Project Drawings
Project Cost Estimate

PROJECT ANALYSIS33

Summary of Analysis
Key Project Factors
 • Project Issues
 • Site Visit Observations
Cost Model
Function Analysis
 • Random Function Identification

PROJECT ANALYSIS (continued)

Value Metrics
 • Define Performance Requirements
 • Define Performance Attributes and Scales
 • Prioritize Performance Attributes
 • Measure Performance of Baseline Concept
 • Measure Performance of VA Alternatives
 • Define VA Strategies
 • Compare Performance – Baseline Concept and Recommended VA Strategy
 • Rating Rationale for Recommended VA Strategy
 • Compare Value
 • Rating Rationale for Accepted VA Alternatives
 • Random Function Identification Documentation

IDEA EVALUATION 49

Performance Attributes
Evaluation Process
Idea Summary
Idea Summary List

VA PROCESS..... 56

Pre-Study
VA Study
VA Report
Caltrans VA Study Activity Chart
VA Study Agenda
VA Study Meeting Attendees

VA STUDY SUMMARY REPORT

FINAL RESULTS

VA Study Summary Report – Final Results

EA 1N590 D-8 I-15 Mojave Wildlife Project

PN 0823000021
EA 1N590
08-SBd-15
PM 114.0-171.5



A virtual Value Analysis (VA) study, sponsored by the California Department of Transportation (Caltrans) District 8 (D-8) and facilitated by Value Management Strategies, Inc. (VMS), was conducted for the EA 1N590 D-8 I-15 Mojave Wildlife Crossings Project located in San Bernadino County, California. The workshop was facilitated September 18– The I-15 Mojave Wildlife Crossings Project is located along Interstate 15 (I-15) from Post Mile (PM) R114.0 to PM 171.5. It proposes to construct wildlife crossings and fencing in the Mojave Desert at three locations along I-15 near Cave Mountain, also known as Cady Mountain, (PM R116.70); Soda Mountain, also known as zzyzx, (PM R129.75); and Clark Mountain (PM 168.05). The dedicated wildlife crossings will provide safe and sustainable passages for bighorn sheep and other wildlife across I-15 with the aim to restore wildlife connectivity and promote genetic diversity, as well as allow for the safe movement of all animals.

While there are several undercrossings (washes and large box culverts) present along I-15, data shows desert bighorn sheep are less likely to move through these structures unlike other medium and large mammals such as bobcats and mountain lions. Like other large mammals, desert bighorn sheep need large, connected habitats to breed and thrive. I-15 divides the previously connected ranges into isolated habitat fragments. This decreases desert bighorn sheep genetic diversity, increases inbreeding, and increases territorial disputes amongst males. The fragmentation of habitat currently forces desert bighorn sheep to cross over I-15, increasing risk of vehicular crashes and desert bighorn sheep fatalities.

The current escalated total project cost is estimated to be \$96,096,000.

VA STUDY TIMING

The VA study was conducted during the PS&ED phase of the project, which is to be completed in September 2023. The project is scheduled for Ready to List (RTL) in December 2023, and Contract Acceptance is scheduled for December 2025.

PROJECT PURPOSE AND NEED

The purpose of this project is to restore wildlife connectivity by constructing bridges across I-15 in the vicinity of Soda Mountain, Cave Mountain, and Clark Mountain Pass in San Bernardino County to function as wildlife crossings.

The need for the proposed project is based on desert bighorn sheep genetic and tracking data that demonstrates I-15 is a movement barrier for sheep that have historically traveled between the northern mountain ranges and southern mountain ranges.

VA STUDY OBJECTIVES

The objectives of the VA study were to:

1. Analyze the current project design, estimate, and schedule
2. Provide possible cost and/or schedule saving recommendations
3. Provide performance improvement recommendations

KEY PROJECT ISSUES

The items listed below are the key drivers, constraints, or issues being addressed by the project and considered during this VA study to identify possible improvements.

- Bighorn sheep are causing vehicle crashes in their attempt to cross I-15. External environmentalist groups have approached Caltrans about the possible uptick in frequency of crossings due to climate change conditions. Fencing that provides animals with adequate guidance to the crossing is a general concern of the design team.
- The scheduling of this project is concurrent with the Brightline West High Speed Rail Project, which will connect Los Angeles to Las Vegas, and will run along the median of I-15. There are concerns regarding coordination of the construction staging for the two projects.
- Right-of-way (ROW) is a concern with this project, as land acquisition in this area can be costly. Currently, there are ongoing ROW negotiations for the northeastern-most crossing (Clark Mountain); the area north of I-15 has yet to be acquired by Caltrans. If any design aspects are changed requiring additional ROW, this could greatly impact the total cost of the project.

*Note: During the VA study, it was brought to the attention of the VA team that Brightline West (BW) was currently in the middle of a redesign of the crossing structures. This effort for BW will look at cost savings for the structure types through a separate value analysis process performed by BW. The team was asked by the BW design lead to disregard the review of alternative crossing structures until they chose and designed new crossing structures. The VA team was directed to focus on supporting structures and aesthetics.

EVALUATION OF BASELINE CONCEPT

During the VA study, a number of analytical tools and techniques were applied to develop a better understanding of the baseline concept. A major component of this analysis was Value Metrics, which seeks to assess the elements of cost, performance, time, and risk as they related to project value. These elements require a deeper level of analysis, the results of which are detailed in the *Project Analysis* section of this report. The key performance attributes identified for the project are listed in the table, “Performance Attributes.” A summary of the major observations and conclusions identified during the evaluation of the baseline concept, which led the VA team to develop the alternatives and recommendations presented in this report follows.

Performance Attributes
Multi-Modal Connectivity
Long-Term Environmental Impacts
Construction Impacts
Traffic Operations
Maintainability

The stakeholders rated the five performance attributes identified based on their contribution to the success of the project. Through a comparison process, study participants determined that *Long-Term Environmental Impacts* were weighted the highest at 29% as the project is primarily about reestablishing connectivity for animals crossing I-15— particularly for bighorn sheep. *Maintainability* and *Construction Impacts (Short-Term Environmental Impacts)* were rated on the next tier of importance at 24% and 20%, respectively. *Traffic Operations* and *Multi-Modal Connectivity* were weighted the lowest at 15% and 12%, as both were determined to be largely unaffected in this area. Although initially reviewed, it was later noted that *Multi-Modal Connectivity* would not be a critical component in this project, though the VA team was instructed to continue to include it.

The initial evaluation of the current basis, or baseline concept, for the project by the stakeholders determined that it represents an effective and responsible approach to provide animal crossing structures while taking into consideration the remote location and ROW constraints. Although there are still some details that need to be further developed, the five performance attributes scored higher than typical projects of this nature and prove that a great deal of work and effort have been applied to the current design. The baseline concept should address current crossing structure design parameters and provide sufficient guidance and access to migrating animals.

Overall, the stakeholders concluded that this baseline concept for the project was good and addressed many of the key concerns admirably; however, there is still room for potential project value improvement, especially with regard to project staging and crossing structure design.

FINAL VA STUDY RESULTS

Stakeholders accepted all three of the VA team's proposed VA alternatives for improvement of the project. Below are the accepted VA alternatives along with their associated potential initial cost savings, potential change in schedule, performance change, and a brief discussion of each.

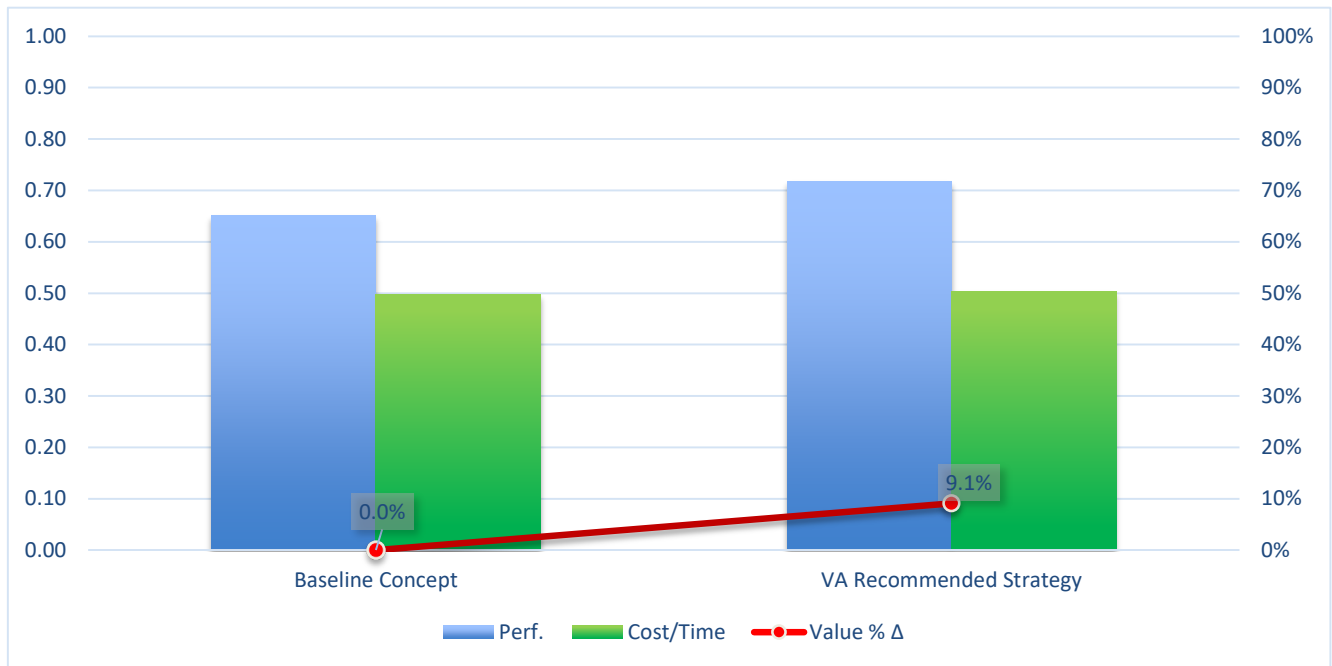
Alternative No. and Description	Initial Cost Savings	Change in Schedule	Change in Performance
1.0 Upgrade mechanically stabilized earth (MSE) wall with geogrid	\$206,000	No change	No change
The baseline concept will use mechanically stabilized earth (MSE) walls with reinforcing strips that require select backfill. The proposed alternative concept would use MSE wall with geogrid reinforcement and to use cost effective backfill.			
2.0 Combine graded slope and reduce the height of the MSE retaining walls	\$568,000	No change	+ 2.2 %
The baseline concept will use MSE wall for the entire bridge approach. The proposed alternative concept would use a combination of MSE wall and a graded earth slope for the bridge approach.			
3.0 Architectural treatment recommendations	(\$3,019,000)	No change	+ 8.1 %
The baseline concept includes \$2.2M for surface texturizing and staining to match the existing corridor. It is noted that approximately \$3.3M for steel artwork was not included in the cost estimate provided to the VA team. The proposed alternative concept would reduce the texturizing and staining and add the cost for steel artwork that would be placed on the bridge, adding a \$3.3M cost.			

Summary of Accepted VA Alternative

Strategy Description	Initial Cost Savings	Change in Schedule	Change in Performance	Value Change
Accepted VA Alternatives VA Alternatives 1.0, 2.0, 3.0.	(\$2,245,000)	No change	+ 10.4 %	+ 9.1 %

Note: Because the cost data depicted above represents savings, a number in parentheses represents a cost increase.

Comparison of Value – Baseline Concept & Accepted Recommended VA Strategy



VA TEAM

VA Study Team

Name	Organization	Title
Fred Kolano	VMS, Inc.	VA Study Facilitator
Meaghan Rowland	VMS, Inc.	VA Study Assistant
Miriam Bishop	Caltrans – District 8	Landscape Architecture
Reza Mortezaie	Caltrans – District 8	Bridge Design
Refaat El Sherif	Caltrans – District 8	Roadway Design
Tyrha Delger	Caltrans – District 8	Environmental/Biology
John Santos	Caltrans – District 8	Construction
Walid Saoud	Caltrans – District 8	Traffic Operations
Andrew Walters	Caltrans – District 8	Environmental
Ben Wells	Caltrans – District 8	Bridge Architecture & Aesthetics
Isaac Tasabia	Caltrans – District 8	Bridge Architecture & Aesthetics
Brian Fortier	Brightline West	Design Lead
Juan Carlos Velasquez	Brightline West	Construction

Key Project Contacts

Name	Organization	Title
Nivine Georges	Caltrans – District 8	DVAC
Nader Naguib	Caltrans – District 8	Project Manager

VA ALTERNATIVES

The results of this study are presented as individual alternatives to the baseline concept. Each alternative consists of a summary of the baseline concept, a description of the suggested change, a listing of its advantages and disadvantages, a cost comparison, change in performance and value, discussion of schedule and risk impacts (if applicable), and a brief narrative comparing the baseline concept with the alternative. (Please refer to the *Project Analysis* section of this report for an explanation of how the performance attributes and value are calculated.) Sketches, calculations, and performance attribute ratings are also presented where applicable. The cost comparisons reflect a similar level of detail as in the baseline estimate.

PROPOSED VA ALTERNATIVES

Alternative No. & Description	Initial Cost Savings	Change in Schedule	Performance Change	Value Change
1.0 Upgrade mechanically stabilized earth (MSE) wall with geogrid	\$206,000	No change	No change	+ 0.1 %
2.0 Combine graded slope and reduce the height of the MSE retaining walls	\$568,000	No change	+ 2.2 %	+ 2.4 %
3.0 Architectural treatment recommendations	(\$3,019,000)	No change	+ 8.1 %	+ 7.3 %

Note: Because the cost data depicted above represent savings, a number in parentheses represents a cost increase.

OTHER CONSIDERATIONS

The VA team identified the following observations and design suggestions, relatively general in nature, for consideration by the Project Development Team (PDT). More detailed descriptions can be found in the *Ideal Evaluation* portion of this report.

- Conduct a charrette with internal and external stakeholders that focuses on project aesthetics concepts.
- Conduct an analysis of the different types of retaining walls.
- Implement early coordination with the water control board to understand erosion control expectations.
- Construct the directional fencing as first order of work.
- Create a large path of boulders to direct sheep to the crossing points.

Alignment with Safe System Objectives

The VA process considers the degree to which the baseline concept and VA alternatives align with and support the five USDOT Safe System objectives for all road users. These objectives include:

Safe Road Users focuses on people and behaviors with the goal to support safe, responsible behavior by people who use the roads; this prioritizes their ability to reach the destination unharmed. This often takes the form of improvement through clear signage, roadway facilities that are consistent with expectations, and items that affect driver behavior and predictability.

Safe Vehicles expands the availability of vehicle systems and roadway features that facilitate the operation of safer vehicles; this additionally aims to help prevent crashes and minimize the impact of crashes for both occupants and non-occupants. This currently focuses primarily with transportation management systems (TMS) and its communication with drivers in addition to shoulder width accommodations for law enforcement, EMS, and distressed vehicles.

Safe Speeds promotes safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement. This category often includes aspects such as signage, traffic management, and road characteristics including speedbumps, roundabouts, crosswalks, etc.

Safe Roads aims to mitigate human mistakes and account for injury tolerances, encourage safer behaviors, and facilitate safe travel for the most vulnerable users. This encompasses the geometry and logistics of a roadway with items such as roadway sight distance, stopping sight distance, shoulder and buffer widths, and roadway delineation.

Post-Crash Care provides roadway features that support post-crash care and enhances the survivability of crashes through expedient access to emergency medical care while simultaneously creating a safe working environment for vital first responders. This also helps prevent secondary crashes through robust traffic incident management practices. This category often encompasses features such as shoulder width suitable for supporting first responders and emergency vehicle turn-arounds, pullouts, or other access points.

The baseline concept for the project was assessed by the project team and is included in the *Project Analysis* section of this report. Each VA alternative was assessed by the VA team with respect to its influence on alignment with Safe System objectives and is included in each VA alternative form.

SUMMARY OF PERFORMANCE IMPROVEMENTS

The Caltrans HQ VA Program requires the following information to enable reporting of performance to the FHWA. Only the six standard Caltrans performance attributes, shown in the table below, are to be documented. Caltrans does not require reporting of the performance of any other attributes utilized in this study.

Summary of Proposed VA Alternative Performance Improvements

Alt. No.	<i>Multi-Modal Connectivity</i>	<i>Long-Term Environmental Impacts</i>	<i>Construction Impacts</i>	<i>Traffic Operations</i>	<i>Maintainability</i>	<i>Project Schedule</i>
1.0						
2.0		Improved				
3.0		Improved			Improved	

Summary of Accepted VA Alternative Performance Improvements

Alt. No.	<i>Multi-Modal Connectivity</i>	<i>Long-Term Environmental Impacts</i>	<i>Construction Impacts</i>	<i>Traffic Operations</i>	<i>Maintainability</i>	<i>Project Schedule</i>
1.0						
2.0		Improved				
3.0		Improved			Improved	

VA ALTERNATIVE IMPLEMENTATION ACTION RECOMMENDATION

EA 1N590 D-8 I-15 Mojave Wildlife Crossings Project

Providing your disposition of these alternatives denotes your recommendation to implement, based on current information, in the given project development phase. It is recognized that future conditions may change this disposition. Your comments will be discussed at the Implementation Meeting where final disposition and savings validation will be determined.

Responses prepared by: Tyrha Delger

Date: 3/6/24

VA ALTERNATIVE 1.0

Upgrade mechanically stabilized earth (MSE) wall with geogrid

Disposition Recommendation: *(Select one)*



AGREE



AGREE WITH MODIFICATIONS



DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

There is a cost savings for upgrading to MSE wall with geogrid. The lack of schedule impacts and change in performance make this change, in my opinion, lower risk with the reward of having a cost savings.

VA ALTERNATIVE 2.0

Combine graded slope and reduce the height of the MSE retaining walls

Disposition Recommendation: *(Select one)*



AGREE



AGREE WITH MODIFICATIONS



DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

There is a cost savings and performance increase with this alternative. Therefore, I agree it would be beneficial to implement.

VA ALTERNATIVE IMPLEMENTATION ACTION RECOMMENDATION

EA 1N590 D-8 I-15 Mojave Wildlife Crossings Project

VA ALTERNATIVE 3.0

Architectural treatment recommendations

Disposition Recommendation: *(Select one)*



AGREE



AGREE WITH MODIFICATIONS



DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

Even though the cost will increase significantly, it is important for a project to have some sort of architectural treatment to improve the visual impacts. Especially since the area is surrounded by natural landscapes, a plain bridge will stick out and decrease the visual beauty of the area. By having architectural treatments on the bridges, it will improve the visual impact and help the bridges blend better into the background.

VA ALTERNATIVE IMPLEMENTATION ACTION RECOMMENDATION

EA 1N590 D-8 I-15 Mojave Wildlife Crossings Project

Providing your disposition of these alternatives denotes your recommendation to implement, based on current information, in the given project development phase. It is recognized that future conditions may change this disposition. Your comments will be discussed at the Implementation Meeting where final disposition and savings validation will be determined.

Responses prepared by: Tuan A. Truong

Date: 3/12/24

VA ALTERNATIVE 1.0

Upgrade mechanically stabilized earth (MSE) wall with geogrid

Disposition Recommendation: (Select one)



AGREE



AGREE WITH MODIFICATIONS



DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

Geogrid reinforcement will require Geotech Unit to analyze, recommend, and approve. If successful, the geogrid reinforcement will save costs for the project.

VA ALTERNATIVE 2.0

Combine graded slope and reduce the height of the MSE retaining walls

Disposition Recommendation: (Select one)



AGREE



AGREE WITH MODIFICATIONS



DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

The combine graded slope will need Landscape Unit concurrence since the slope will wrap around the MSE Wall which will cut the aesthetic treatment short from the Visual Impact Analysis (VIA) concept, reducing costs. It is anticipated that approval of the slope is feasible, since the approaches can use large rock that is not easily eroded.

VA ALTERNATIVE 3.0

Architectural treatment recommendations

Disposition Recommendation: (Select one)



AGREE



AGREE WITH MODIFICATIONS



DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

The steel artwork meets stakeholders' expectations and complies with the Visual Impact Analysis, Caltrans' Beautification Strategic Objective, and is consistent with the draft Project Aesthetics Landscape Masterplan (PALM) for the Brightline West project. Costs can be managed by adjusting sizes and using repetition.

VA ALTERNATIVE IMPLEMENTATION ACTION RECOMMENDATION

EA 1N590 D-8 I-15 Mojave Wildlife Crossings Project

Providing your disposition of these alternatives denotes your recommendation to implement, based on current information, in the given project development phase. It is recognized that future conditions may change this disposition. Your comments will be discussed at the Implementation Meeting where final disposition and savings validation will be determined.

Responses prepared by: Andrew Walters

Date: 3/11/24

VA ALTERNATIVE 1.0

Upgrade mechanically stabilized earth (MSE) wall with geogrid

Disposition Recommendation: *(Select one)*



AGREE



AGREE WITH MODIFICATIONS



DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

In addition to cost savings, this alternative also provides the opportunity for use of locally sourced material which would result in reduced greenhouse gas emissions produced through backfill transport. No apparent negative environmental disadvantages.

VA ALTERNATIVE 2.0

Combine graded slope and reduce the height of the MSE retaining walls

Disposition Recommendation: *(Select one)*



AGREE



AGREE WITH MODIFICATIONS



DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

The implementation of this alternative would result in the reduction of square footage surface area requiring architectural treatments. Bridge/approach setting would appear more natural – beneficial for both aesthetic and biological perspectives. A broader approach area to the bridge would increase accessibility for bighorn sheep but may also increase the environmental footprint. Benefits outweigh disadvantages.

VA ALTERNATIVE IMPLEMENTATION ACTION RECOMMENDATION

D-8 I-15 Mojave Wildlife Crossings Project

VA ALTERNATIVE 3.0

Architectural treatment recommendations

Disposition Recommendation: (Select one)

☒

AGREE

☐

AGREE WITH MODIFICATIONS

☐

DISAGREE

Explain, comment, and/or discuss rationale for disposition recommendation:

The alternative would align with Caltrans Visual Impact Assessment concept. Improves long term Env. Impacts and maintainability. There was some discussion that cost estimate was high and there is possibility that cost could be reduced based on refined estimates from Landscape Architecture.

VA ALTERNATIVE 1.0

Upgrade mechanically stabilized earth (MSE) wall with geogrid

Initial Cost Savings:	\$206,000
Change in Schedule:	No change
Performance Change	No change
Value Change	+ 0.1 %

Description of Baseline Concept: The baseline concept proposes to use MSE walls with reinforcing strips that require select backfill.

Description of Alternative Concept: The alternative concept proposes to use MSE wall with geogrid reinforcement and to use cost effective backfill.

Advantages:

- No need to import large quantities of select backfill.
- Uses locally sourced soil materials.
- Reduces greenhouse gas emissions due to reduced truck travel.
- Longer MSE wall life expectancy as geogrid material has less potential for corrosion.

Disadvantages:

- None noted.

Discussion: The main benefit of this proposed alternative concept is to reduce the overall cost of backfill used in this project. The addition of geogrid would provide the same retaining wall stability at a lower cost. This alternative also provides the opportunity for use of locally sourced material which would result in reduced greenhouse gas emissions produced through backfill transport. There is a potential for savings related to traffic control costs, though it was determined at the time of the study that there was not enough information to investigate and calculate those cost savings.

Project Management Considerations: The alternative concept will require coordination with design and materials to determine the feasibility of this approach.

Discussion of Schedule Impacts: This alternative concept represents a negligible impact to the project's construction schedule. There is a potential for schedule savings due to reduced transportation distance for procurement of locally sourced material.

VA ALTERNATIVE 1.0

Upgrade mechanically stabilized earth (MSE) wall with geogrid

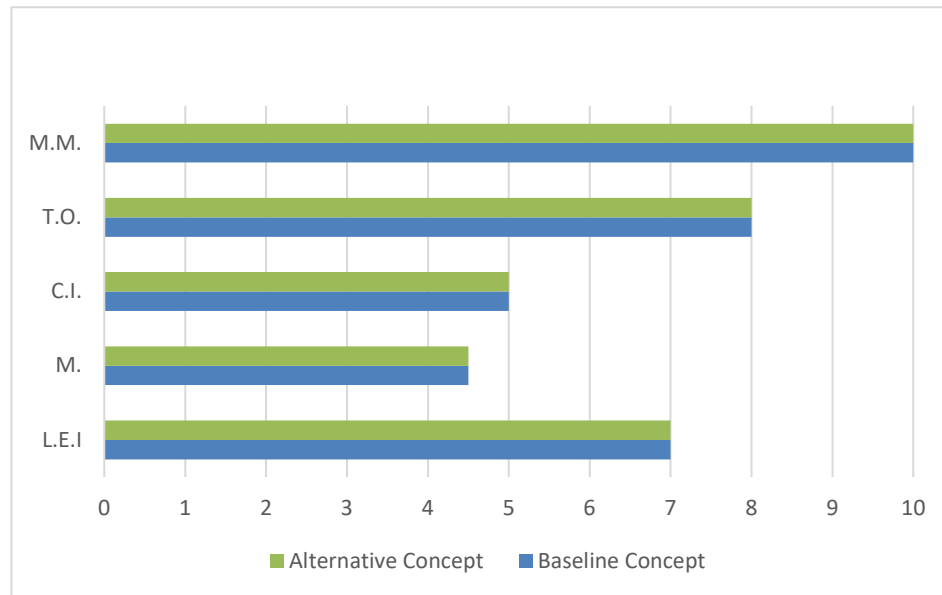
Alignment with Safe System Objectives

<i>Increased Alignment: $\triangle$ No change in alignment: $\bigcirc$ Decreased Alignment: ∇</i>		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	The VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	The VA alternative would not affect vehicle safety.
Safe Speeds	$\bigcirc$	The VA alternative would not affect vehicles.
Safe Roads	$\bigcirc$	The VA alternative would not affect vehicle speeds.
Post-Crash Care	$\bigcirc$	The VA alternative would not affect post-crash care.

VA ALTERNATIVE 1.0

Upgrade mechanically stabilized earth (MSE) wall with geogrid

Comparison of Performance



Performance Attribute	Rationale for Change in Performance
Multi-Modal Connectivity (MM)	No significant change.
Long-Term Environmental Impacts (LEI)	No significant change.
Construction Impacts (CI)	No significant change.
Maintainability (M)	No significant change.
Traffic Operations (TO)	No significant change.

VA ALTERNATIVE 1.0

Upgrade mechanically stabilized earth (MSE) wall with geogrid

Alternative Concept Image



Example of geogrid placement

Initial Cost Estimate

CONSTRUCTION ELEMENT		BASELINE CONCEPT			ALTERNATIVE CONCEPT		
Description	Unit	Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
MSE wall baseline design concept	SF	17,550	\$ 169	\$ 2,965,950			\$ -
Upgrade MSE wall w/ Geogrid	SF				17,550	\$ 161	\$ 2,825,550
				\$ -			\$ -
ROADWAY SUBTOTAL				\$ 2,965,950			\$ 2,825,550
ROADWAY MARK-UP	47%			\$ 1,393,997			\$ 1,328,009
ROADWAY TOTAL				\$ 4,359,947			\$ 4,153,559
TOTAL				\$ 4,359,947			\$ 4,153,559
TOTAL (Rounded)				\$4,360,000			\$4,154,000
						SAVINGS	\$206,000

VA ALTERNATIVE 2.0

Combine graded slope and reduce the height of the MSE retaining walls

Initial Cost Savings:	\$568,000
Change in Schedule:	No change
Performance Change	+ 2.2 %
Value Change	+ 2.4 %

Description of Baseline Concept: The baseline concept is to use MSE wall for the entire bridge approach.

Description of Alternative Concept: The alternative concept proposes to use a combination of MSE wall and a graded earth slope for the bridge approach.

Advantages:

- Reduces the quantity of materials for MSE wall construction.
- Reduces architectural treatment quantity.
- Increases ease of access for bighorn sheep.

Disadvantages:

- Increases embankment import borrow quantity.
- Increases the environmental footprint.

Discussion: The main benefit of this proposed alternative concept is to reduce MSE wall quantity and cost. The implementation of this alternative would result in the reduction of square footage surface area requiring the implementation of architectural treatments. This alternative also provides a broader approach area to the bridge, therefore increasing accessibility for bighorn sheep. A broader approach area could increase or decrease the length/cost of directional fencing.

Project Management Considerations: The alternative concept will require coordination and approval with design, materials, environmental, and construction to determine the feasibility of this approach.

Discussion of Schedule Impacts: This alternative concept represents a negligible impact to the project schedule's critical path.

VA ALTERNATIVE 2.0

Combine graded slope and reduce the height of the MSE retaining walls

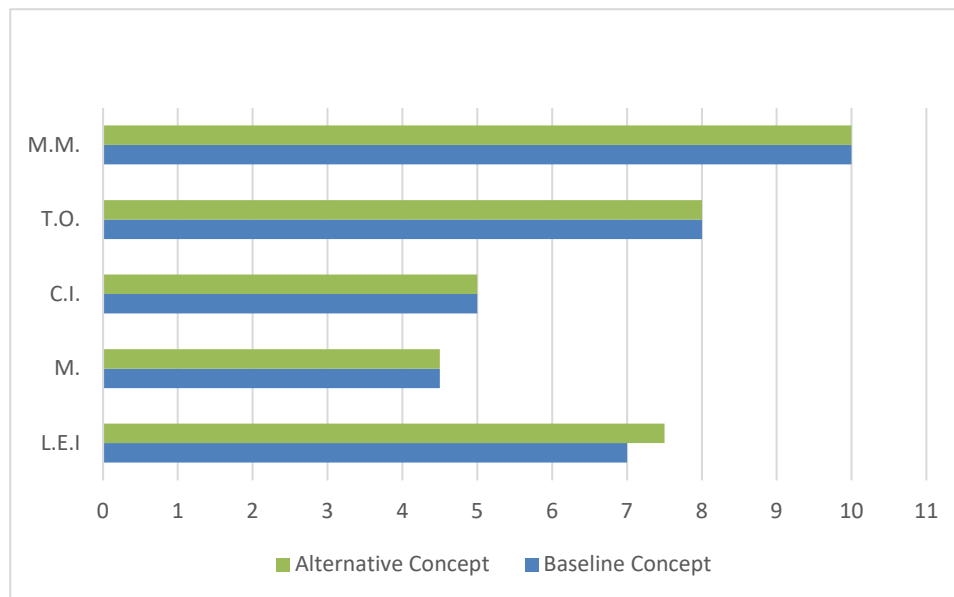
Alignment with Safe System Objectives

<i>Increased Alignment: $\triangle$ No change in alignment: $\bigcirc$ Decreased Alignment: ∇</i>		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	The VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	The VA alternative would not affect vehicle safety.
Safe Speeds	$\bigcirc$	The VA alternative would not affect vehicles.
Safe Roads	$\bigcirc$	The VA alternative would not affect vehicle speeds.
Post-Crash Care	$\bigcirc$	The VA alternative would not affect post-crash care.

VA ALTERNATIVE 2.0

Combine graded slope and reduce the height of the MSE retaining walls

Comparison of Performance

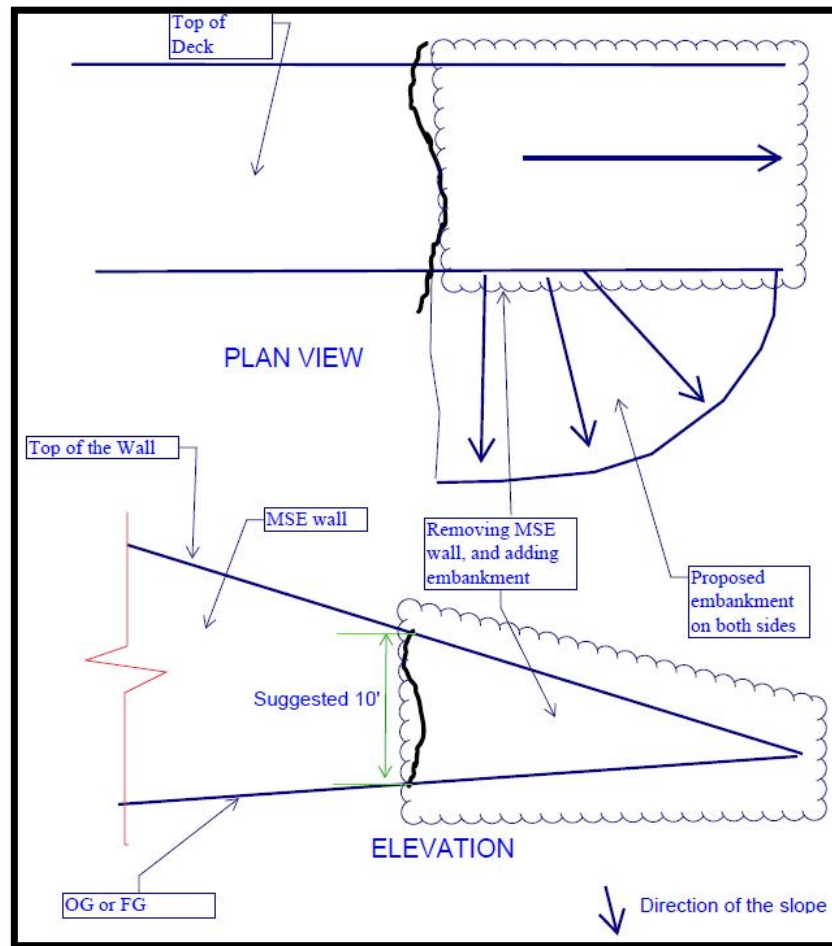


Performance Attribute	Rationale for Change in Performance
Multi-Modal Connectivity (MM)	No significant change.
Long-Term Environmental Impacts (LEI)	This alternative would lessen the structural concrete material while preserving and enhancing the natural setting.
Construction Impacts (CI)	No significant change.
Maintainability (M)	No significant change.
Traffic Operations (TO)	No significant change.

VA ALTERNATIVE 2.0

Combine graded slope and reduce the height of the MSE retaining walls

Alternative Concept Image



Drawing of the proposed embankment

VA ALTERNATIVE 2.0

Combine graded slope and reduce the height of the MSE retaining walls

Initial Cost Estimate

CONSTRUCTION ELEMENT		BASELINE CONCEPT			ALTERNATIVE CONCEPT		
Description	Unit	Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
MSE Wall (assume 20% reduction)	SF	17,550	\$ 169	\$ 2,965,950	14,050	\$ 169	\$ 2,374,450
Replace wall with imported borrow	CY			\$ -	5,865	\$ 40	\$ 234,600
				\$ -			\$ -
Architectural Treatment (Stain)	SF	37,050	\$ 30	\$ 1,111,500	33,550	\$ 30	\$ 1,006,500
Architectural Treatment (Texture)	SF	37,050	\$ 30.24	\$ 1,120,392	33,550	\$ 30.24	\$ 1,014,552
				\$ -			\$ -
ROADWAY SUBTOTAL				\$ 5,197,842			\$ 4,630,102
ROADWAY MARK-UP	0%			\$ -			\$ -
ROADWAY TOTAL				\$ 5,197,842			\$ 4,630,102
TOTAL		\$ 5,197,842			\$ 4,630,102		
TOTAL (Rounded)		\$5,198,000			\$4,630,000		
						SAVINGS	\$568,000

VA ALTERNATIVE 3.0

Architectural treatment recommendations

Initial Cost Savings:	(\$3,019,000)
Change in Schedule:	No change
Performance Change	+ 8.1 %
Value Change	+ 7.3 %

Description of Baseline Concept: The baseline concept includes \$2.2M for surface texturizing and staining to match the existing corridor. It is noted that approximately \$3.3M for steel artwork was not included in the cost estimate provided to the VA team. The cost estimate came from the PIR.

Description of Alternative Concept: The alternative concept proposes to reduce the texturizing and staining and add the cost for steel artwork that would be placed on the bridge thus adding a \$3.3M cost. This additional cost was identified after PIR was prepared.

Advantages:

- Will comply with the Visual Impact Analysis Avoidance and Minimization Measures which would comply with Stakeholders' expectations.
- Complies with the Caltrans' Beautification Strategic Objective.

Disadvantages:

- Requires additional cost to include steel artwork in the project.

Discussion: The main benefit of this proposed alternative concept is to comply with various measures implemented by Caltrans. It is noted that electricity from the proposed high-speed train may negatively affect the steel artwork; however, at the time of the VA study there was not enough information to determine the impact. The project was in Zero Phase and the environmental document and the Advanced Planning Study not been completed.

Project Management Considerations: The alternative concept will require coordination with design, environmental, and construction. At the time of the VA study the project was in the Zero Phase of project development. The cost estimate of the baseline design concept should be revised to reflect this cost.

Discussion of Schedule Impacts: This alternative concept does not represent an impact to the project schedule's allotted 250 working days.

VA ALTERNATIVE 3.0

Architectural treatment recommendations

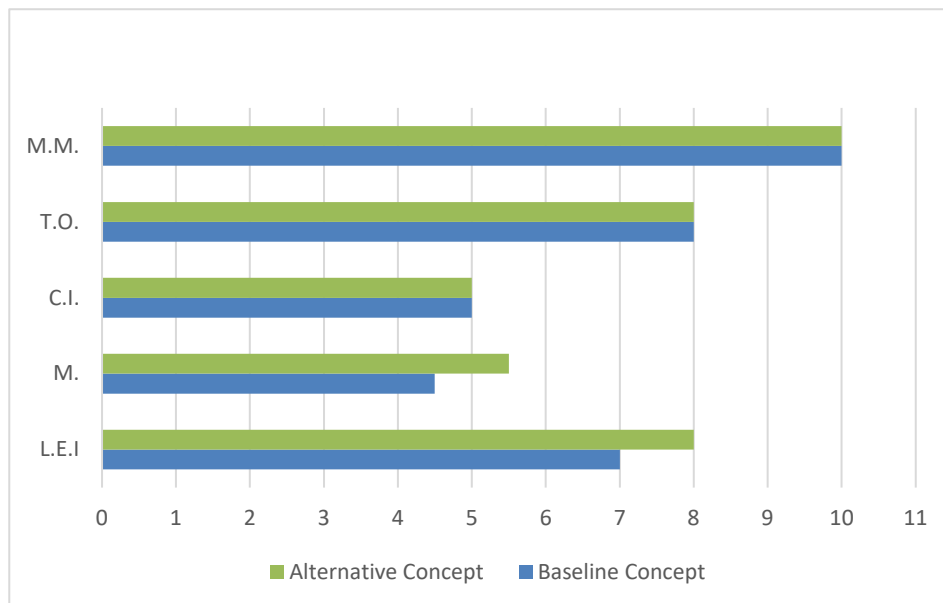
Alignment with Safe System Objectives

<i>Increased Alignment: $\triangle$ No change in alignment: $\bigcirc$ Decreased Alignment: ∇</i>		
Objective	Effect	Rationale
Safe Road Users	$\bigcirc$	The VA alternative would not affect roadway user behavior.
Safe Vehicles	$\bigcirc$	The VA alternative would no affect vehicle safety.
Safe Speeds	$\bigcirc$	The VA alternative would not affect vehicles.
Safe Roads	$\bigcirc$	The VA alternative would not affect vehicle speeds.
Post-Crash Care	$\bigcirc$	The VA alternative would not affect post-crash care.

VA ALTERNATIVE 3.0

Architectural treatment recommendations

Comparison of Performance



Performance Attribute	Rationale for Change in Performance
Multi-Modal Connectivity (MM)	No significant change.
Long-Term Environmental Impacts (LEI)	The VA team added the cost/considerations for the steel artwork proposed by the original design, but that had not been calculated into the estimate.
Construction Impacts (CI)	No significant change.
Maintainability (M)	The addition of architectural treatments in lieu of surface texturizing and staining reduces maintenance as the treatments would require a “one-time” placement and come an anti-graffiti coating. It was noted by the Landscape Architect on the team that artwork, such as that being proposed, has been shown to reduce defacing of structures over time.
Traffic Operations (TO)	No significant change.

VA ALTERNATIVE 3.0
Architectural treatment recommendations

Baseline Concept Image



Example of texturized and stained overpass

Alternative Concept Image



Proposed architectural treatments

VA ALTERNATIVE 3.0

Architectural treatment recommendations

Assumptions and Calculations:

The initial cost assumption of the alternative concept:

- Reduces the cost for staining and texturizing concrete.
- An additional \$3.5M for bridge steel artwork is needed (excludes project markups and escalation).

Initial Cost Estimate

CONSTRUCTION ELEMENT		BASELINE CONCEPT			ALTERNATIVE CONCEPT		
Description	Unit	Quantity	Cost/Unit	Total	Quantity	Cost/Unit	Total
ROADWAY ITEMS							
Staining	LS	1	\$ 1,111,500	\$ 1,111,500			\$ -
Texture	LS	1	\$ 1,120,250	\$ 1,120,250			\$ -
Steel Artwork @ 6,600 SF	LS			\$ -	1	\$ 2,500,000	\$ 2,500,000
Staining (reduced by 20%)	LS			\$ -	1	\$ 889,200	\$ 889,200
Texture (reduced by 20%)	LS			\$ -	1	\$ 896,200	\$ 896,200
				\$ -			\$ -
ROADWAY SUBTOTAL				\$ 2,231,750			\$ 4,285,400
ROADWAY MARK-UP	47%			\$ 1,048,923			\$ 2,014,138
ROADWAY TOTAL				\$ 3,280,673			\$ 6,299,538
TOTAL		\$ 3,280,673			\$ 6,299,538		
TOTAL (Rounded)		\$3,281,000			\$6,300,000		
						SAVINGS	(\$3,019,000)

PROJECT INFORMATION

PROJECT INFORMATION

BACKGROUND

This project proposes to restore wildlife connectivity by constructing bridges across I-15 in the vicinity of Soda Mountain, Cave Mountain, and Clark Mountain Pass in San Bernardino County to function as wildlife crossings.

Environmental impacts and mitigation measures were not considered nor required when I-15 and most of Southern California's freeways were built in the 1950s. As a result, the construction of I-15 divided the previously connected natural habitat ranges of many wildlife species. Currently, safe and sustainable wildlife crossings across I-15 are not available. Without the addition of wildlife crossings in the vicinity of Cave Mountain, Soda Mountain, and Clark Mountain Pass, the ecological and environmental impact on wildlife that resulted from the construction of I-15 will persist. Future transportation options, such as high-speed rail, along the I-15 corridor are expected to create even greater impediments to wildlife crossings. Consequently, the fate of many wildlife species within the mountain passes and desert valleys of eastern San Bernardino County will remain at risk.

PROJECT DESCRIPTION

The I-15 Mojave Wildlife Crossings Project is located along I-15 from R114.0 to PM 171.5. It proposes to construct wildlife crossings and fencing in the Mojave Desert at three locations along I-15 near Cave Mountain, also known as Cady Mountain (PM R116.70); Soda Mountain, also known as zzyzx, (PM R129.75); and Clark Mountain (PM 168.05). The dedicated wildlife crossings will provide safe and sustainable passages for bighorn sheep and other wildlife across I-15 with the aim to restore wildlife connectivity and promote genetic diversity, as well as allow for the safe movement of all animals.

While there are several undercrossings (washes and large box culverts) present along I-15, data shows desert bighorn sheep are less likely to move through these structures unlike other medium and large mammals such as bobcats and mountain lions. Like other large mammals, desert bighorn sheep need large, connected habitats to breed and thrive. I-15 divides the previously connected ranges into isolated habitat fragments. This decreases desert bighorn sheep genetic diversity, increases inbreeding, and increases territorial disputes amongst males. The fragmentation of habitat currently forces desert bighorn sheep to cross over I-15, increasing risk of vehicular crashes and desert bighorn sheep fatalities.

EXCLUDED CONSIDERATIONS

At the time of the study, the Brightline West design lead, Brian Fortier, who was also part of the VA team, requested that the team refrain from considering alternatives to the proposed two-span cast-in-place/prestressed.

INFORMATION PROVIDED TO THE VA TEAM

The following project documents were provided to the VA team for their use during the study:

- **Project Initiation Report – Caltrans, District 8 – May 2023**

PROJECT DRAWINGS

The project team provided preliminary project layouts and cross-sections for the VA team during the VA study. The project location and the typical cross-section drawings are included in the project report when applicable and are available from the PDT upon request.

PROJECT COST ESTIMATE

The VA study used the most current cost estimate for the project dated May 12, 2023. This estimate reflects the preferred design option at the time of the study and details the fully supported and escalated project cost at \$96,096,000.

PROJECT ANALYSIS

PROJECT ANALYSIS

SUMMARY OF ANALYSIS

The following analysis tools were used to study the project:

- Key Project Factors
- Cost Model
- Function Analysis
- Value Metrics

KEY PROJECT FACTORS

The first day of the VA study included meetings with the project stakeholders. The following summarizes key project issues and site visit observations identified during these sessions.

Project Issues

The following are some of the issues and concerns associated with the project:

- Bighorn sheep are causing vehicle crashes in their attempt to cross I-15. External environmentalist groups have approached Caltrans about the possible uptick in frequency of crossings due to climate change conditions. Fencing that provides animals with adequate guidance at the crossing is a general concern of the design team.
- The scheduling of this project is concurrent with the Brightline West High Speed Rail Project, which will connect Los Angeles to Las Vegas, and will run along the median of I-15. There are concerns regarding coordination of construction staging for the two projects.
- ROW is a concern with this project, as land acquisition in this area can be costly. Currently, there are ongoing ROW negotiations for the northeastern-most crossing (Clark Mountain); the area north of I-15 has yet to be acquired by Caltrans. If any design aspects are changed, this could greatly impact the total cost of the project.

Site Visit Observations

A virtual site visit was conducted by the VA study team using Google Earth in order to visually assess the project's site conditions and to provide context to all project design components. Through this effort and through the use of several project plan sheets, the VA team was able to more fully understand the constraints, challenges, and issues relating to the project.

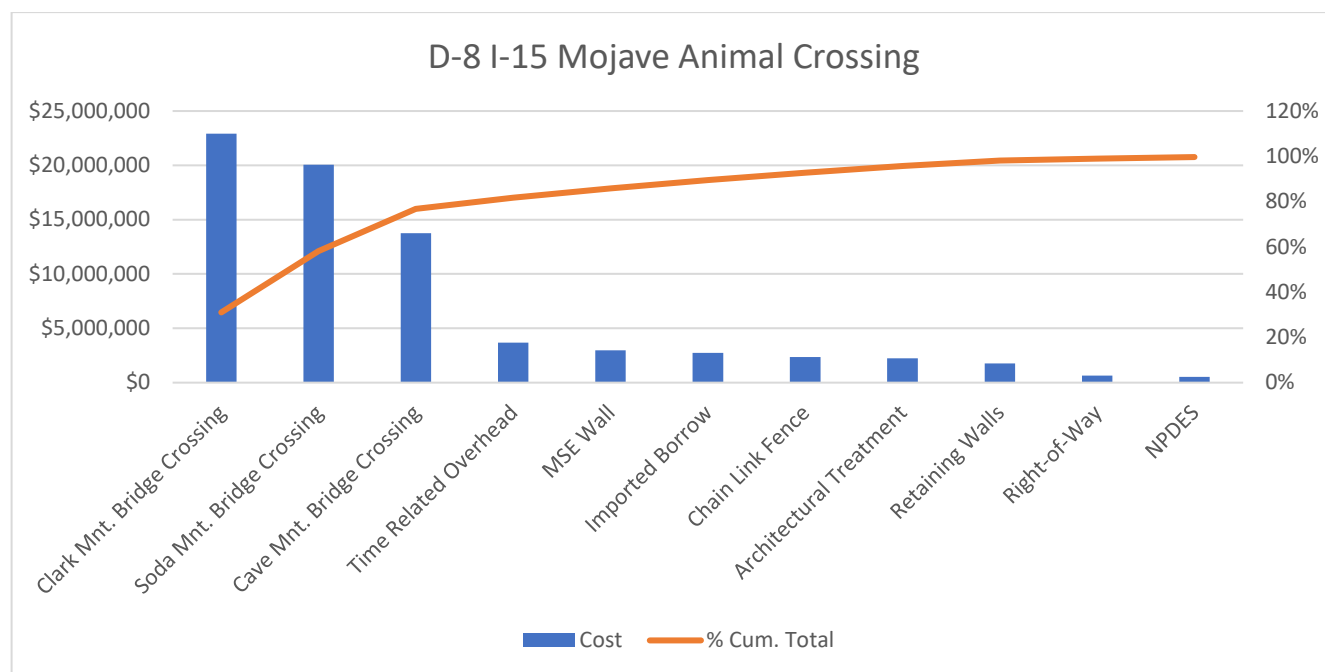
COST MODEL

The VA team leader prepared a cost model from the cost estimated presented in the *Project Information* section of this report. The model is based on the updated project cost estimate dated May 12, 2023, which was made available during the VA study and is organized to identify major construction element or trade categories, the original estimated costs, and the percent of total project cost for the significant cost items. The cost model and Pareto chart below provide a concise perspective of where major cost items reside within the project cost estimate.

Cost Model

D-8 I-5 Mojave Wildlife Crossing			
Item	Cost	% of Total	% Cum. Total
Clark Mnt. Bridge Crossing	\$22,910,000	31%	31%
Soda Mnt. Bridge Crossing	\$20,046,250	27%	58%
Cave Mnt. Bridge Crossing	\$13,746,000	19%	77%
Time Related Overhead	\$3,668,400	5%	82%
MSE Wall	\$2,965,950	4%	86%
Imported Borrow	\$2,730,480	4%	89%
Chain Link Fence	\$2,371,000	3%	93%
Architectural Treatment	\$2,231,750	3%	96%
Retaing Walls	\$1,756,480	2%	98%
Right of Way	\$651,200	1%	99%
NPDES	\$520,000	1%	100%
Traffic Control System	\$250,000	0%	100%
Major Project Cost Elements	\$73,847,510		

Pareto Chart



For VA alternative development, additional percentage-based cumulative mark-ups not included in the initial cost of construction are reflected within the total project estimate. These mark-ups include 3% for Minor Items, 10% for Mobilization, 2% for Supplemental Work, 1% for State Furnished Materials and Expenses, and 20% for Roadway Contingency. This mark-up total was used for the purpose of developing initial construction costs for analyzing individual practical design VA alternatives.

FUNCTION ANALYSIS

Function analysis was performed, and a Random Function Identification was conducted which revealed the key functional relationships for the project. This analysis provided a greater understanding of the total project and how the project's performance, cost, time, and risk characteristics are related to the various functions identified. The project's Random Function Identification graphics are included at the end of this section.

Random Function Identification

Project Element	Function
Architectural Treatment	Minimize Visual Impacts
Chain Link Fence	Construct Barrier
Imported Borrow	Create Embankment
Miscellaneous	Manage Project

Project Element	Function
Miscellaneous	Protect Worker
NPDES	Protect Water Quality
Overcrossing	Span Obstacle
Overcrossing	Protect Animals
ROW	Establish Clearance

VALUE METRICS

Value Metrics provides a systematic and structured means of considering the relationship of a project’s performance, cost, time (schedule), and risk as they relate to value. Project performance must be properly defined and agreed upon by the stakeholders at the beginning of the VA study. The basic equation for value is:

$$Value = \frac{Performance}{Cost + Time}$$

The performance attributes and requirements developed are then used throughout the study to identify, evaluate, and document changes to performance and value. OptionLab® was used to facilitate the Value Metrics portions of the VA Study.

The following pages describe the steps in the Value Metrics process.

Define Performance Requirements

Performance requirements represent essential, non-discretionary aspects of project performance. Any concept that fails to meet the project’s performance requirements, regardless of whether it was developed during the project’s design process or during the VA study, cannot be considered as a viable solution. Concepts that do not meet a performance requirement cannot be considered further unless such shortcomings are addressed through the VA study process in the form of VA alternatives. It should be noted that in some cases, a performance requirement may also represent the minimum acceptable level of a performance attribute. The following performance requirements were selected for this project.

Performance Requirement	Definition
Highway Design Standards	Any deviation from the Caltrans’ Highway Design Manual must be approvable by the District’s Design Reviewer.
Structural Design Standards	Any structure on the project must comply with current seismic design standards and meet the Load Resistance Design Factor.
Environmental Review Process	Any concept or design modification considered must comply with state and federal environmental law and be compatible with the environmental review process.
Project Milestones	Several critical schedule milestones must be met in order to meet legislative and/or funding requirements, these include PA&ED – September 2023; PS&E – September 2023; RTL – December 2023; Award – April 2024; Contract Acceptance – December 2025; End Project – June 2027.

Define Performance Attributes and Scales

The Project Development Team (PDT) identified several performance attributes that represent those aspects of a project's scope that possess a range of potential acceptable values. A standard numeric scale is used for each attribute ranging from 1 to 10 where (Minimum Acceptable = 1) to an ideal level of performance (Ideal = 10). The following performance attributes were selected for this project.

Multi-Modal Connectivity (MM)

The degree to which the project is contributing to the overall connectivity of the transportation network and access to modal options. Enhancements in multi-modal connectivity should correlate to reductions in greenhouse gases (GHGs) and vehicle miles traveled (VMTs). Possible sub-attributes that may be considered include bicycles, pedestrians, and transit.

Rating	Label	Description
8-10	Ideal	The highest reasonable level of performance is achieved.
6-8	High	A high level of performance is achieved.
4-6	Medium	A medium level of performance is achieved.
2-4	Low	A low level of performance is achieved.
0-2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Long-Term Environmental Impacts (LEI)

These are impacts to the environment that extends beyond the completion of construction. This category includes multiple different types of environmental considerations such as ecological (both air and water quality); biological (both animals and plants); cultural (such as parks, historical buildings, and other resources related to the built environment); archaeological (sites and resources that could be disturbed); visual; noise; equity; and economic impacts.

Rating	Label	Description
8-10	Ideal	The highest reasonable level of performance is achieved.
6-8	High	A high level of performance is achieved.
4-6	Medium	A medium level of performance is achieved.
2-4	Low	A low level of performance is achieved.
0-2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Construction Impacts (*Short-Term Environmental Impacts*) [CI]

These are impacts to the environment that encompasses the construction time up through the completion of construction. This category includes multiple different types of short-term environmental and construction impacts such as ecological (both air and water quality); biological (both animal and plant); cultural (such as parks, historical buildings and other resources related to the built environment), archaeological (sites and resources that could be disturbed); visual, noise (including vibration and dust); equity, economic, and interim traffic operations.

Rating	Label	Description
8-10	Ideal	The highest reasonable level of performance is achieved.
6-8	High	A high level of performance is achieved.
4-6	Medium	A medium level of performance is achieved.
2-4	Low	A low level of performance is achieved.
0-2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Maintainability (M)

The impact to long-term maintenance and operations of the infrastructure. This attribute is focused on life-cycle costs and maintenance access considerations. Maintainability may also consider the resiliency of the infrastructure which includes design and service life in the face of uncertainty. This category encompasses items such as long-term maintenance costs; energy costs related to lighting and technology; maintenance access; service and design life; preservation of critical lifelines; and resiliency of the infrastructure to climate change, seismic events, forest fires, drought, sea-level rise, and surface drainage.

Rating	Label	Description
8-10	Ideal	The highest reasonable level of performance is achieved.
6-8	High	A high level of performance is achieved.
4-6	Medium	A medium level of performance is achieved.
2-4	Low	A low level of performance is achieved.
0-2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Traffic Operations (TO)

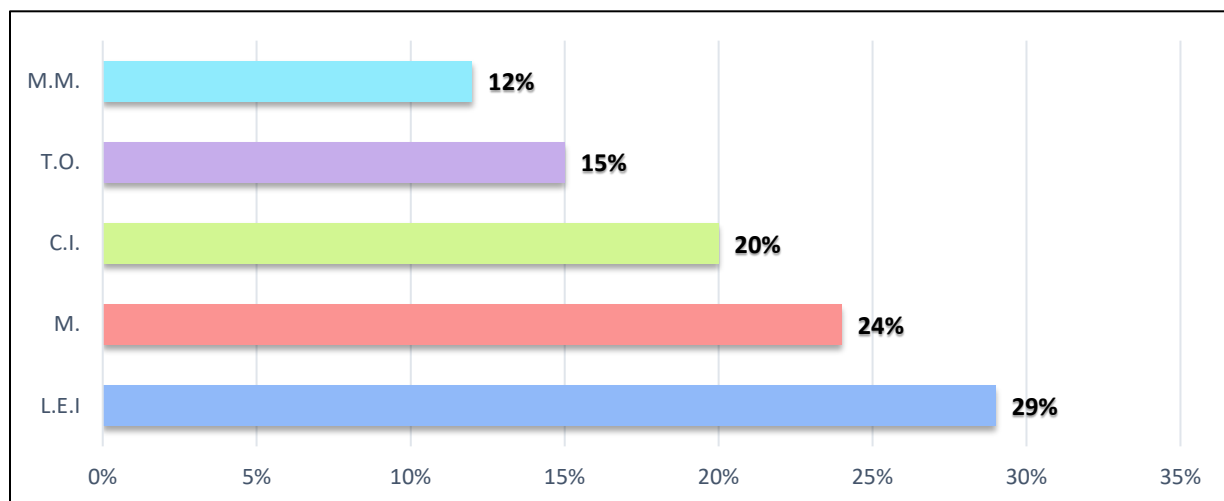
This category considers the degree to which the project improves or degrades traffic operations and conforms to design standards on the transportation system. Included are items such as mainline operations (traffic movement on mainline facilities and/or specific ramp or weaving movement) and local operations (traffic movement on specific local arterials and streets).

Rating	Label	Description
8-10	Ideal	The highest reasonable level of performance is achieved.
6-8	High	A high level of performance is achieved.
4-6	Medium	A medium level of performance is achieved.
2-4	Low	A low level of performance is achieved.
0-2	Minimum Acceptable	The minimum acceptable level of performance is achieved.

Prioritize Performance Attributes

Once the performance attributes were defined and their scales developed, the PDT and stakeholders prioritized them based on their relative importance to the project using OptionLab®. The performance attributes were systematically compared to each other using the software. Participants were then asked to indicate their priorities and the relative intensities of their preferences. The chart below provides the results of this analysis and includes the complete breakdown of the priorities, expressed as a percentage of the whole.

Performance Attributes Prioritization



Measure Performance of Baseline Concept

The PDT and stakeholders evaluated the performance of the baseline concept relative to the performance attribute definitions and scales previously identified. The information below reflects the performance ratings and associated rationale for each attribute.

Multi-Modal Connectivity	Rating: 10.0
Rating Rationale: Ideal – This attribute of the project cannot be further improved upon.	
Long-Term Environmental Impacts	Rating: 7.0
Rating Rationale: High – There is a need to review optimization of the lengths of the overcrossings; they should span both the roadbeds and railroads while not having a negative impact to the surrounding landscape and soil bed.	
Construction Impacts	Rating: 5.0
Rating Rationale: Medium – The project requires the import of large quantities of borrow which is not ideal. Staging alongside the concurrent BW project is still being discussed by the PDT; ROW is tight in the area and does not leave optimal room for staging for two separate projects. Availability of water is a concern for construction, as this is a desert area with no local water sources.	
Traffic Operations	Rating: 8.0
Rating Rationale: Ideal – This project should not have a large impact to the traveling public or freeway operations.	
Maintainability	Rating: 4.5
Rating Rationale: Medium – PDT members noted that there still has not been much discussion regarding maintenance of the project in conjunction with BW about the high-speed rail project. Accessibility for maintenance workers has yet to be decided.	

Measure Performance of VA Alternatives

The VA team prepared performance assessments of each of the VA alternatives during the Development Phase of the VA study. For each VA alternative, the VA team rated its performance using the previously defined scale for each performance attribute. The rationale for any change in performance as compared to the baseline concept was recorded. Please refer to the individual performance assessments for each VA alternative as presented in the *VA Alternatives* section of this report.

Define VA Strategies

The VA team identified a single VA strategy for consideration. The Recommended VA Strategy reflects the combination of complimentary VA alternatives recommended by the team and is summarized in the table below.

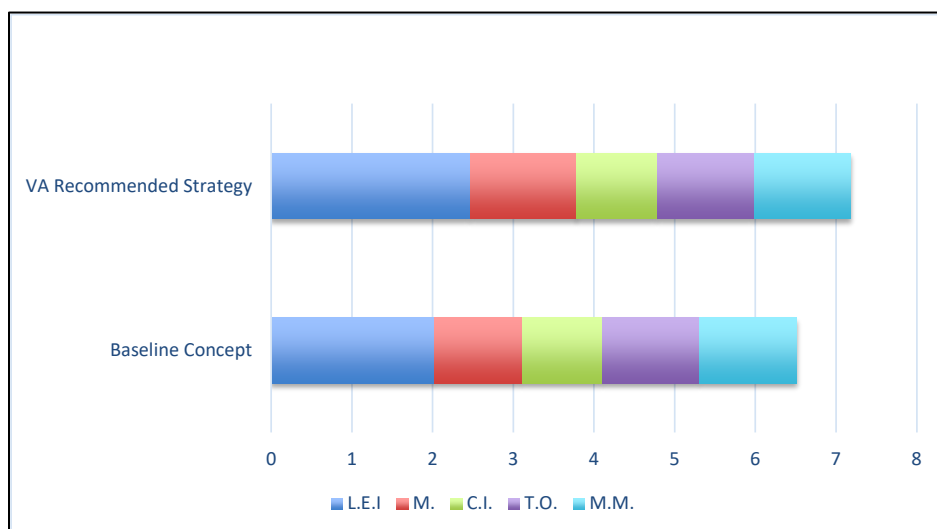
Summary of Recommended VA Strategy

Strategy Description	Initial Cost Savings	Change in Schedule	Performance Change	Value Change
Recommended VA Strategy <i>Alts. 1.0, 2.0, & 3.0</i>	(\$2,245,000)	No change	+ 10.4 %	+ 9.1 %

Compare Performance – Baseline Concept and Recommended VA Strategy

The VA team considered the combined effect of all VA alternatives for the Recommended VA Strategy. The total performance scores reflect the performance rating for each attribute multiplied by its overall priority (weight) expressed using a ration scale. A total performance score of “10” would indicate the highest level of desired performance (i.e., “ideal” performance). The chart below compares the total performance scores for the baseline concept and the VA strategy.

Comparison of Performance



Rating Rationale for Recommended VA Strategy

The rating rationale for the performance of the baseline concept was presented previously in this section. The rating rationale for the VA strategy developed by the VA team is provided below.

Recommended VA Strategy (Alternatives 1.0, 2.0, and 3.0)

Multi-Modal Connectivity	Rating: 10.0
Rating Rationale: Ideal – The project should have no impact to Multi-Modal Connectivity.	
Long-Term Environmental Impacts	Rating: 8.5
Rating Rationale: Ideal – This project will lessen the structural concrete material while preserving and enhancing the natural setting.	
Construction Impacts	Rating: 5.0
Rating Rationale: Medium – The project should have no impact to construction.	
Traffic Operations	Rating: 8.0
Rating Rationale: Ideal – The project should have no impact on traffic operations.	
Maintainability	Rating: 5.5
Rating Rationale: Medium – The addition of architectural treatments will provide a graffiti-proof surface, lessening the maintenance required for upkeep. With the combination of a graded slope and reduced MSE wall height, there will be less erosion control inspections.	

Compare Value

The cost and time (i.e., schedule) elements were compared and prioritized by the project decision makers. The relative importance of cost and time is shown on the following table. These factors were applied to the cost and time scores and incorporated into the value calculations.

Relative Importance	
COST	50 %
TIME	50 %

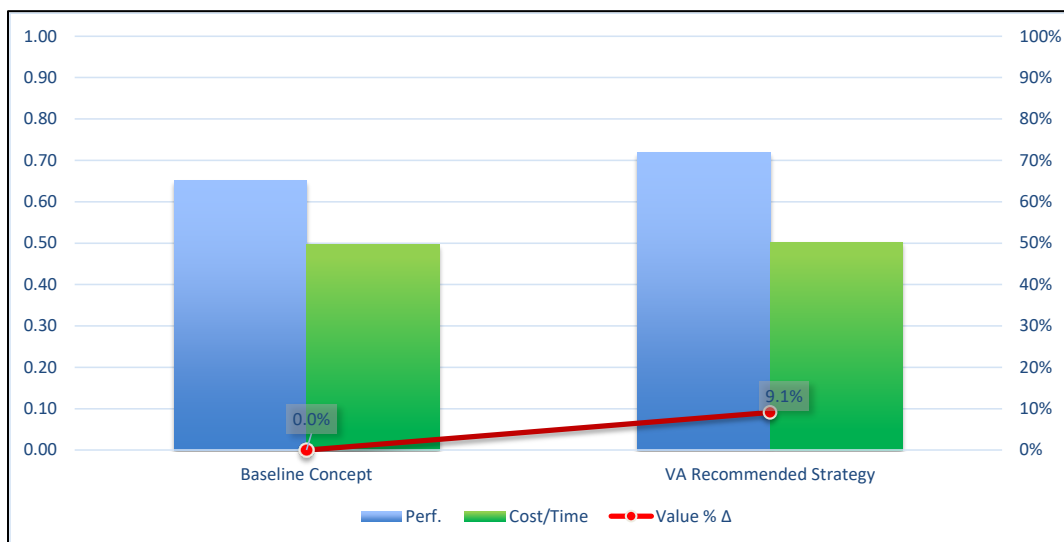
Once relative scores for performance, cost, and time have been derived, the next step is to synthesize a value index for the baseline concept and each VA strategy. This is achieved by applying the following algorithm for value:

- V = Value
- f = Function
- P = Performance
- C = Cost
- t = Time
- α = Risk

$$V_f(P, C, t)_{total} = \frac{\sum_{n=1}^{\infty} P_n \cdot \alpha}{\sum_{n=1}^{\infty} [(C_n \cdot \alpha) + (t_n \cdot \alpha)]}$$

A Value Matrix was prepared which facilitated the comparison of competing strategies by organizing and summarizing this data into a tabular format. The performance scores for each strategy were divided by the total cost/time scores for each strategy to derive a value index. The value indices for the VA strategy are then compared against the value index of the baseline concept and the difference is expressed as a percent ($\pm\%$) deviation.

Comparison of Value Baseline Concept and VA Recommended Strategy



Rating Rationale for Accepted VA Alternatives

The rating rationale for the performance of the baseline concept was presented previously. The rating rationale for the accepted VA alternatives developed by the VA team is provided below.

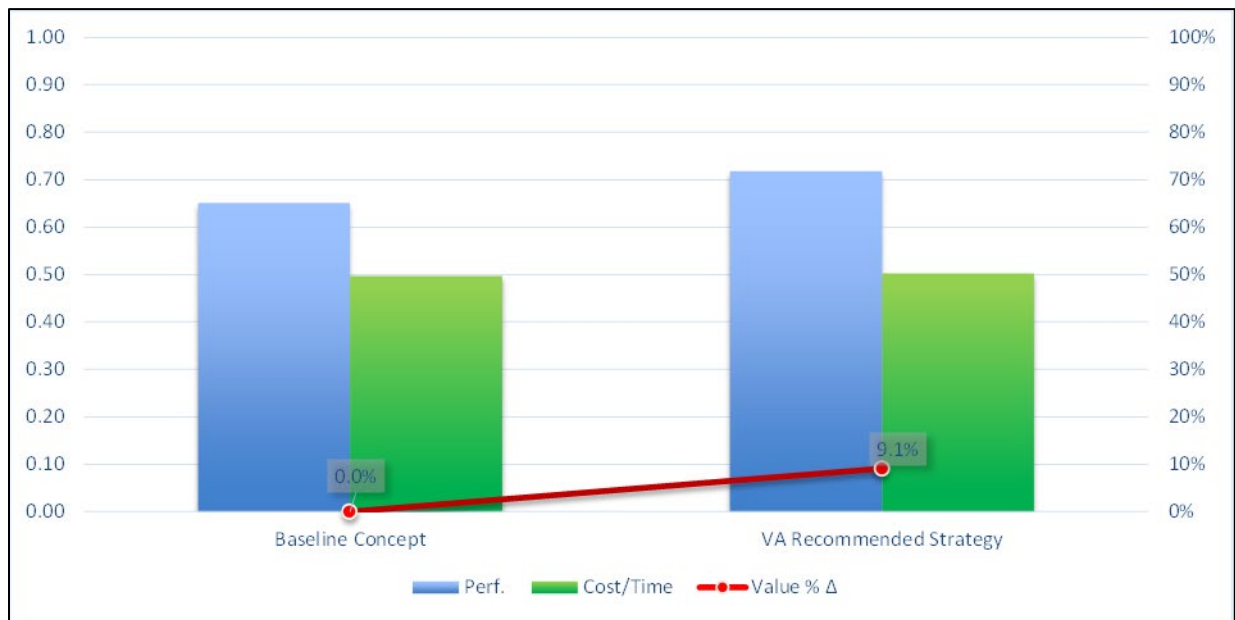
Accepted VA Alternatives (1.0, 2.0, and 3.0)

Multi-Modal Connectivity	Rating: 10.0
Rating Rationale: Ideal – The project should have no impact to Multi-Modal Connectivity.	
Long-Term Environmental Impacts	Rating: 8.5
Rating Rationale: Ideal – This project will lessen the structural concrete material while preserving and enhancing the natural setting.	
Construction Impacts	Rating: 5.0
Rating Rationale: Medium – The project should have no impact to construction.	
Traffic Operations	Rating: 8.0
Rating Rationale: Ideal – The project should have no impact on traffic operations.	
Maintainability	Rating: 5.5
Rating Rationale: Medium – The addition of architectural treatments will provide a graffiti-proof surface, lessening the maintenance required for upkeep. With the combination of a graded slope and reduced MSE wall height, there will be less erosion control inspections.	

Value Matrix Baseline Concept and Accepted VA Alternatives

Strategies	Performance Score	Net Change	Cost/Time Score	Net Change	Value Index	Change in Value
Baseline Concept	0.65	No change	0.24	No change	1.3	No change
Accepted VA Alternatives	0.71	+ 6 %	0.25	- 1.5 %	1.4	+ 9.1 %

Comparison of Value Baseline Concept & Accepted VA Alternatives



Random Function Identification

Project Elements	Functions					Function Key
						Element weeks \$M
Architectural Treatment (Aesthetic Elements) \$2.2M	Improve Aesthetics	Minimize Visual Impacts	Integrate Appearance	Improve Public Acceptance	Mitigate Opposition	
ROW \$651,000	Establish Access	Accomm. Access	Maintain Clearance	Establish Clearance	Acquire Permits	
NPEDS \$500,000	Protect Water Quality	Minimize Runoff	Control Erosion			
Misc.	Manage Project	Protect Worker				

Random Function Identification

Project Elements	Functions				
	Function Key				
Chain-link Fence \$2.4M	Direct Animals	Construct Barrier	Control Access	Protect Motorists	Protect Railway
Overcrossing \$56M	Span Obstacle	Protect Animals	Facilitate Crossing	Connect Animal Trails	Optimize Biodiversity
TRO \$3.6M	Compensate Contractor				
MSE Wall \$3M	Retain Backfill	Build Approach	Establish Grade Transition		
Imported Borrow \$2.7M	Raise Grade	Create Embankment	Build Crossing		



IDEA EVALUATION

IDEA EVALUATION

The ideas generated by the VA team were carefully evaluated, and project-specific attributes were applied to each idea to assure an objective evaluation.

PERFORMANCE ATTRIBUTES

The following are key performance attributes identified for this project and used to assist the VA team in evaluating the ideas:

- Multi-Modal Connectivity
- Long-Term Environmental Impacts
- Construction Impacts
- Traffic Operations
- Maintainability

The VA team enlisted the assistance of the stakeholders and project team (when available) to develop these attributes so that the evaluation would reflect their specific requirements.

EVALUATION PROCESS

The VA team generated and evaluated ideas on how to perform the various project functions using other approaches. The idea list was grouped by function or major project element. Each idea was evaluated with respect to the functional requirements of the project. Performance, cost, time, and risk may also have been considered during this evaluation.

Once each idea was fully evaluated, it was rated to determine which ideas had the greatest potential for value improvement. Ideas identified for development as VA alternatives or as other considerations are documented in the *VA Alternatives* section of this report.

IDEA SUMMARY

All the ideas generated during the Creativity Phase using brainstorming techniques are recorded on the following pages. The team created and evaluated these ideas together using Miro. Each idea received an idea code based on the function statement under which it was brainstormed. The following table indicates the functions related to each idea code.

Idea Code	Related Function
CB	Construct Barrier
CE	Create Embankment
EC	Establish Clearance
MP	Manage Project
MV	Minimize Visual Impacts

Idea Code	Related Function
PA	Protect Animals
PW	Protect Worker
PW	Protect Water Quality
SO	Span Obstacle

Protect Animals (PA) | 8

- PA-1 Use precast concrete arch bridge

ABD
- PA-2 Construct a steel arch girder bridge

Other Consideration
- PA-3 Add culverts to the project for small animal crossings

ABD Dismiss
- PA-4 Reduce imported borrow by 25%

Dismiss Need more info
- PA-5 Use a fence with large openings in lieu of chain link fence

ABD
- PA-6 Include cameras for long term monitoring and enforcement

ABD
- PA-7 Create a path of large piles of boulders to lead sheep from mountains to the crossings

Other Consideration
- PA-8 Implement an onsite crusher to crush rocks and reduce imported borrow

Dismiss

Protect Animals (PA) | 8

- PA-9 Include features to preclude OHV use.

ABD Other Consideration
- PA-10 Examine the possibility of using narrower bridge of less than 100' wide

Dismiss
- PA-11 Construct CIP wall in lieu of MSE walls

Dismiss
- PA-12 Put pollinator plant species on the crossings to encourage pollinator presence

Dismiss
- PA-13 Use existing precast girders such as Pretensioned bulb-tee girders, and then create the arch using architectural elements

ABD Dismiss
- PA-14 Don't do arches

Dismiss
- PA-15 Use local soil instead of import for backfill

Dismiss
- PA-16 Use precast/prestressed box girders which are way cheaper than precast

Dismiss

Construct Barrier (CB) | 8

- CB-1 Combine desert tortoise fence with directional fencing

ABD
- CB-2 Order of work: construct directional fence first to reduce temporary desert tortoise fencing

Other Consideration
- CB-3 Curve the top of the chain link fence to prevent big horn sheep from jumping off bridge

Dismiss
- CB-4 Coordinate with California Department of Fish and Wildlife, big horn sheep specialist, on screening traffic

Dismiss
- CB-5 Use a fence that can't be seen through so wildlife can't see the road and to block noise and light

Dismiss
- CB-6 For Zzyzx Overcrossing, look to see if the crossing is where the adult male was killed in 2019 and move it to that location

Dismiss
- CB-7 Increase length of fence

Dismiss
- CB-8 Decrease length of fence

Dismiss

Span Obstacle (SO) | 7

SO-1 Use graded slopes instead of walls

Dismiss

SO-2 Use regular CIP retaining wall instead of MSE

Duplicate

SO-3 Construct bridges simultaneously

ABD

SO-4 Reduce wall height by adding land formed soil embankment.

Duplicate

SO-5 Reduce cost by utilizing the Three Span Precast Arch Bridge instead of the Cast in Place Box Girder Bridge

ABD Duplicate

SO-6 Analyze the different types of retaining walls to find the least expensive and/or most effective option

Other Consideration

SO-7 Relocate / realign bridge

Dismiss

Span Obstacle (SO) | 5

SO-8 For Soda Mt, can the existing Zzyx Rd be used for animal crossing too?

Dismiss

SO-9 For Cave Mt, would the high-voltage power line affect the project? If yes, move the alignment south

ABD Dismiss

SO-10 Cave Mt location seem to be very close/on top of a fault. If so, shift the alignment

SO-11 Shift Cave Mt. alignment to it doesn't have such a steep slope towards west due to the OG elevation difference

Dismiss

S-12 Shift Soda Mt. alignment slightly north, so the elevation of top of the bridge deck is closer to OG elevations on either sides of the bridge. So the ramps will have smaller grade differences.

Dismiss

Establish Clearance (EC) | 6

EC-1 Use steep grade to shorten footprint

Duplicate

EC-2 Advance/refine design to reduce permit and mitigation costs

ABD

EC-3 Reduce construction working days to reduce mitigation cost. by overlap cons activities

ABD

EC-4 To reduce the height of the bridge wall, you can submerge the roadway at the bridge.

Dismiss

EC-5 Coordination with High Speed Rail to ensure proper clearances from bridge structural elements

ABD

EC-6 For Clark Mt, shift the alignment north so that its construction is not affected by the closely undercrossing

Dismiss

Create Embankment (CE) | 7

CE-1 Use on site disturbed soil

Dismiss

CE-3 Check with rail project for available export

Dismiss

CE-2 Use steeper grades

Dismiss

CE-4 Use locally sourced borrow

ABD

CE-5 Use a borrow location within Caltrans ROW closer to the crossings

Dismiss

CE-6 Shorten the bridge lengths by re-alignment.

Dismiss

CE-7 Minimize depth of cover over Archs to reduce overall backfill quantity

Dismiss

Create Embankment (CE) | 4

CE-9 Procure waste sand as state furnished material from surface mines incl. Mountain Pass

ABD

CE-10 Clark Mt seems to have conflict with the drainage on the north side. The alignment might need to be moved.

Dismiss Need more info

CE-8 Check on availability of waste sand at area surface mines

ABD

CE-11 To minimize embankment volume, adjust all 3bridges alignments, specially Clark Mt, so the Top of Deck elevation and OG elevations are both sides of the bridge are as close as possible.

Duplicate

Protect Worker (PW) | 5

PW-1 Place electronic alerts on the worker

Dismiss

PW-2 Monitor heat index and don't have workers work during high heat days

ABD

PW-3 Check air quality index (AQI) Daily

ABD

PW-4 Increased visibility for night work (ex. more light towers)

ABD Dismiss

PW-5 Put concrete barriers around the site to stop cars better

ABD

Minimize Visual Impacts (MV) | 6

MV-1 Hold a Charette meeting with both external and internal stakeholders at the start of the design process to agree on a concept. This will help to generate a concept design that has been previously discussed and agreed upon, which will in turn help to generate public acceptance of the project.

Other Consideration

MV-2 Reduce SF of metal art by impressing concrete features

Develop

MV-3 Reduce walls- use graded slopes

Duplicate

MV-4 Reduce the architectural treatment cost

Duplicate

MV-5 Instead of adding steel plates, consider using embossed graphics of big horn sheep on the concrete surface. This will keep enhancement and might reduce cost.

MV-6 Eliminate artwork and use natural material/colors such as textured/etched concrete and rock/boulders.

Minimize Visual Impacts (MV) | 5

MV-7 Use staining designs instead of steel artwork design

MV-8 Eliminate the architectural treatment cost

Duplicate

MV-9 Hold a contest for local artists to paint murals on the structure

Other Consideration

MV-10 Increase stakeholder outreach/ participation

ABD Other Consideration

MV-11 Add signs to bridges or nearby rest stops that explain what the bridges do

Dismiss

Manage Project (MP) | 4

MP-1 Increase work day from 8 to 10 hours and save one?? of 12 months of construction time

Dismiss

MP-2 Co-ordinate with BLW on the HSR project to use their excavated material in lieu of imported borrow.

Dismiss

Duplicate

MP-4 Construct all three bridges at the same time

ABD

MP-3 Construct the High speed rail and this project at the same time

Dismiss

Duplicate

PW-1 To effectively control erosion and sediment on disturbed areas during landscape erosion control, it is crucial to collect and pile Duff and Topsoil before clearing and grubbing. No exceptions

ABD

PW-5 If overcrossings placement impacts waters, move the overcrossing

Dismiss

PW-2 Use silt fencing to stop debris from entering water way

ABD

PW-6 Minimizing earthwork and clearing to preserve existing vegetation and rock formations reduces costs for erosion control.

Dismiss

PW-3 Early coordinate with Water Board for erosion control expectation

Other Consideration

PW-4 Use of on-site excavated boulders instead importing new boulders

Duplicate

VA PROCESS

VA PROCESS

The Caltrans Value Analysis (VA) process involves 16 activities needed to accomplish a VA study, and is organized into three parts: Pre-Study, VA Study, and Report. Integral to Caltrans' VA process is the Value Metrics. Value Metrics provides a systematic and structured means of considering the relationship of a project's performance, cost, time (schedule), and risk as they relate to value.

Project performance must be properly defined and agreed upon by the stakeholders at the beginning of the VA study. The performance attributes and requirements developed are then used throughout the study to identify, evaluate, and document changes to performance and value. OptionLab® was used to facilitate the Value Metrics portions of the VA Study.

The following provides an overview of the Caltrans approach to VA. The Caltrans VA Study Activity Chart at the end of this narrative identifies the steps in each activity, which are detailed as follows.

PRE-STUDY

Meaningful and measurable results are directly related to the pre-study work performed. Depending on the type of study, all or part of the following information needs to be determined during the pre-study phase:

- Clear definition of the current situation and study objectives
- Identification of study team members
- Identification of project stakeholders
- Definition of how stakeholders are impacted by the project
- Identification of key issues and concerns
- Identification of project's performance requirements and attributes
- Status of project cost estimate
- Project data gathered to be distributed to VA team

In preparation for the VA study, the team leader confers with owners and stakeholders to outline the VA process; initiate data gathering; refine project scope and objectives; structure the scope, team members, and technical specialists; and finalize study plans. Specific deliverables are provided.

Following the initial planning meeting, the team leader reviews the data collected for the project and develops a cost model. The team leader also consults with the technical specialists to prepare them for the VA study.

VA STUDY

This VA study was conducted in a virtual environment using WebEx and Miro. WebEx is a virtual meeting platform that supports audiovisual communications and facilitates the use of breakout sessions to allow for multiple, parallel meetings. Miro is a collaborative whiteboard platform that supports a variety of activities. This platform was used extensively to allow participants to share information visually. It was used explicitly to support the Information, Function Analysis, Creativity, and Evaluation Phases of the VM Process.

The VA Job Plan guides the VA team in their search to enhance value in the project or process. Caltrans follows a seven-phase VA Job Plan:

1. Information Phase
2. Function Analysis Phase
3. Creativity Phase
4. Evaluation Phase
5. Development Phase
6. Presentation Phase
7. Implementation Phase

Information Phase

At the beginning of the VA study, the design team presents a more detailed review of the design and the various systems. This includes an overview of the project and its various requirements, which further enhances the VA team's knowledge and understanding of the project.

The project team also responds to questions posed by the VA team. The project's performance requirements and attributes are discussed, and the performance of the baseline concept is evaluated.

Function Analysis Phase

Key to the VA process are the function analysis techniques used during the Function Analysis Phase. These techniques may include but are not limited to:

- Random Function Identification
- Function-Resource Allocation
- Function Analysis System Technique (FAST Diagrams)
- Graphic Function Identification

Analyzing the functions of a project is essential to assuring an owner that the project has been designed to meet the stated criteria and its need and purpose. The analysis of these functions in terms of cost, performance, time, and risk is a primary focus in a VA study and is used to identify areas within a project for value improvement. This procedure is beneficial to the VA team, as it forces the participants to think in terms of functions and their relative value in meeting the project's need and purpose. This facilitates a deeper understanding of the project.

Creativity Phase

The Creativity Phase involves identifying and listing creative ideas. During this phase, the VA team participates in a brainstorming session to identify as many means as possible to provide the necessary project functions. The judgement of the ideas is not permitted in order to generate a broad range of ideas. The idea list includes all of the ideas suggested during the study. These ideas should be reviewed further by the project team since they may contain ideas worthy of further evaluation and may be used as the design develops. These ideas could also help stimulate additional ideas by others.

Evaluation Phase

The purpose of the Evaluation Phase is to systematically assess the potential impacts of ideas generated during the Creativity Phase relative to their potential for value improvement. Each idea is evaluated in terms of its potential impact to performance, cost, time, and risk. Once each idea is fully evaluated, it is classified as an idea to either "Develop" or "Dismiss." Some ideas can also be "Combined" with other promising ideas or ideas which are "Already Being Done." The rationale for why ideas were rated highly but not developed as alternatives is documented in the *Idea Evaluation* section of the report.

Development Phase

During the Development Phase, the highly rated ideas are expanded and developed into VA alternatives. The development process considers the impact to performance, cost, time, and risk of the alternative concepts relative to the baseline concept. This analysis is prepared as appropriate for each alternative, and the information may include a performance assessment, initial cost and life-cycle cost comparisons, schedule analysis, and an assessment of risk. Each alternative describes the baseline concept and proposed changes and includes a technical discussion. Sketches and calculations are also prepared for each alternative as appropriate.

Presentation Phase

The VA study concludes with a preliminary presentation of the VA team's assessment of the project and VA alternatives. The presentation provides an opportunity for the owner, project team, and stakeholders to preview the alternatives and develop an understanding of the rationale behind them.

Implementation Phase

After the stakeholders have had an opportunity to review the alternatives identified by the VA team, the team leader conducts an implementation meeting to discuss the alternatives and resolve appropriate action for each VA alternative. If necessary, any other VA report edits requested by the representatives are also made by the VA team leader and a final report is issued. This implementation meeting helps to ensure that savings or process improvements are not lost due to a lack of communication, and that those VA alternatives that are accepted are properly integrated into the project design.

VA REPORT

Preliminary Report: Following the completion of the VA study, the team leader compiles the information developed during the VA study into the *Preliminary Value Analysis Study Report*. This report, documenting viable alternatives, is provided to the customer within the timeframe requested (usually within two weeks of study completion). The preliminary report also contains a *VA Study Summary Report – Preliminary Findings*, designed to highlight critical elements of the VA study, including detailed documentation of VA alternatives, in a concise manner for the use of parties without the opportunity to review the report in its entirety. More details can be found in the complete preliminary report, which consists of the following documentation: Executive Summary, VA Alternatives, Project Information, Project Analysis, Idea Evaluation, and VA Process.

Final Report: Once all VA alternatives have been either accepted or rejected, the team leader updates the *Preliminary Value Analysis Study Report* to show the final results of the study in a *Final Value Analysis Study Report*. In addition, a Value Analysis Study Summary Report (VASSR) is sent to Caltrans HQ to permit easy documentation into the Caltrans Annual Report to FHWA.

The following Caltrans VA Study Activity Chart describes each activity.

CALTRANS VA STUDY ACTIVITY CHART

PREPARATION					
	INITIATE STUDY ➤ Identify study project ➤ Identify study roles and responsibilities ➤ Define study goals ➤ Select team leader ➤ Prepare draft Study Charter 1	ORGANIZE STUDY ➤ Conduct Pre-Study Meeting ➤ Select team members ➤ Identify stakeholders, decision-makers, and technical reviewers ➤ Identify data collection ➤ Select study dates ➤ Determine study logistics ➤ Update VA Study Charter ➤ Identify and define performance requirements 2	PREPARE DATA ➤ Collect and distribute data ➤ Develop construction cost models ➤ Develop highway user benefit/life-cycle cost (LCC) model (if required) 3		
VA STUDY	Segment 1	INFORM TEAM ➤ Review study activities and confirm reviewers ➤ Present design concept ➤ Present stakeholders' interests ➤ Review project issues and objectives ➤ Rate performance of baseline concept ➤ Visit project site 4	ANALYZE FUNCTIONS ➤ Analyze project data ➤ Expand project functions ➤ Prepare FAST diagram ➤ Determine functional cost drivers and performance 5	CREATE IDEAS ➤ Focus on functions ➤ List all ideas ➤ Apply creativity and innovation techniques (group and individual) 6	EVALUATE IDEAS ➤ Apply key performance attributes to rate idea ➤ List advantages and disadvantages ➤ Consider cost impacts ➤ Rank all ideas ➤ Assign alternatives for development 7
		Segment 2	DEVELOP ALTERNATIVES ➤ Develop alternative concepts ➤ Prepare sketches and calculations ➤ Measure performance ➤ Estimate costs, LCC benefits/costs 8	CRITIQUE ALTERNATIVES ➤ VA alternatives technical review ➤ VA alternatives team consensus review ➤ Identify mutually exclusive groups of alternatives ➤ Identify VA strategies ➤ Validate performance 9	PRESENT ALTERNATIVES ➤ Present findings ➤ Document feedback ➤ Confirm pending reviews ➤ Prepare preliminary report <i>*Interim presentation of study findings</i> 10
	Segment 3		ASSESS ALTERNATIVES** ➤ Review Preliminary Report ➤ Assess alternatives for project acceptance ➤ Prepare draft implementation dispositions <i>**Activities performed by PDT, Technical Reviewers, and Stakeholders</i> 11	RESOLVE ALTERNATIVES ➤ Review implementation dispositions ➤ Resolve implementation actions with decision-makers and stakeholders ➤ Edit alternatives ➤ Revisit rejected alternatives, if needed 12	PRESENT RESULTS* ➤ Present results ➤ Obtain management approval on implemented alternatives ➤ Summarize performance, cost, and value improvements <i>*Final presentation of study results</i> 13
	REPORT				
		DOCUMENT STUDY ➤ Document process and study findings ➤ Distribute Preliminary VA Report ➤ Distribute electronic report to HQ VA Branch ➤ Conduct Implementation Meeting 14	VA IMPLEMENTATION ACTION MEMO <i>(If Conditionally Accepted Alternatives exist)</i> ➤ Publish memo to document action plan to complete study ➤ Resolve Conditionally Accepted Alternatives 15	PUBLISH RESULTS ➤ Document process and study results ➤ Incorporate all comments and implementation actions ➤ Distribute Final VA Report ➤ Distribute electronic report to HQ VA Branch ➤ Update VA Study Summary Report (VASSR) ➤ Provide HQ the Final VA Report in PDF format 16	Note: The dashed boxes indicate steps that may not be required in some VA studies

VA STUDY AGENDA

I-15 Mojave Wildlife Crossings

EA 1N590 PN 0823000021

Day 1 – Monday, September 18 – via WebEx

9:00 *Introductions*

9:15 *Brief overview of the VA Process*

9:30 *Overview of the Project by PDT*

- *Project Purpose & Need / Scope*
- *Issues & Concerns*

10:30 *Confirmation of Project's Baseline Design*

- *Discuss Cost & Schedule*
- *Discuss and Weight Performance Attributes*
- *Discuss and Score Current Design*

10:45 *VA Study Focus Review*

11:00 *Project Design Clarifications & Additional Q&A*

11:30 Lunch

12:30 Virtual Site Visit & Observations (Google Maps)

1:00 Team Review and Discussion of Design Documentation & Estimate Review

2:00 FAST Analysis Discussion

3:30 Initial Team Brainstorming

4:00 Adjourn

Day 2 – Tuesday, September 19 - via WebEx

8:00 Review Agenda

8:30 Review FAST

9:00 Team Brainstorming

10:30 Team Evaluation of VA Ideas

11:30 Lunch

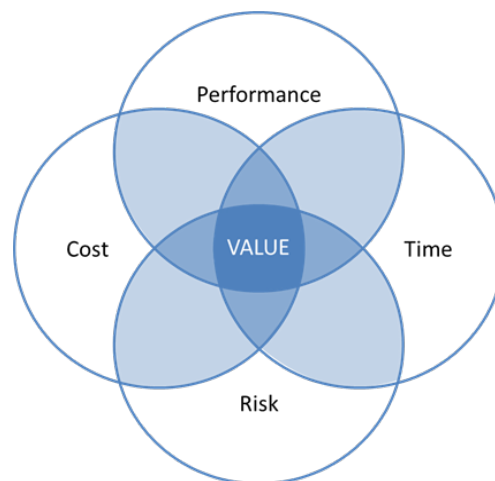
12:30 Final Call for VA Ideas from VA Team

1:00 *Technical Review of VA Ideas*

3:00 Initial Team Development of VA Alternatives

4:00 Adjourn

$$Value = \frac{Performance}{Cost + Time}$$



VA STUDY AGENDA

I-15 Mojave Wildlife Crossings

EA 1N590 PN 0823000021

Day 3 – Wednesday, September 20 - via WebEx

- 8:00 Review Agenda & Validated VA Alternatives
- 8:15 Team Development of VA Alternatives (cont.)
- 11:30 Lunch
- 12:30 Team Development of VA Alternatives (cont.)
- 4:00 Adjourn

Day 4 – Thursday September 21 - via WebEx

- 8:00 Review Agenda & VA Team Recommended Strategy
- 8:30 Team Development of VA Alternatives
- 10:00 Determine and Score VA Team Recommended Strategy
- 11:00 Finalization of VA Other Considerations
- 11:30 Lunch
- 12:30 Final Review VA Study Presentation w/ VA Team

1:00 Presentation of Initial VA Study Results (VA Team Recommended Strategy)

- 2:00 Adjourn

Tentative VA Study Process Dates:

Preliminary Report Distribution: ***by October 3, 2023***

Review/Implementation Comments Due: ***by Date TBD***

Final Report Distribution: ***by Date TBD***

VA STUDY MEETING ATTENDEES

9/18	9/19	9/20	9/21	Imp.	Name	Organization	Position/Role	E-mail
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X					Ayda Homsy	Caltrans D-8		
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X			X	X	Nader Naguib	Caltrans D-8		nader.naguib@dot.ca.gov

9/18	9/19	9/20	9/21	Imp.	Name	Organization	Position/Role	E-mail
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X			X		Huu Ngo	Caltrans D-8		
X			X	X	Karen Pham	Caltrans D-8		
X			X		Tran Hoang	Caltrans D-8		
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			X		Michael Hyunh	Caltrans D-8		
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Attachment S

VISUAL IMPACT ASSESSMENT SIMULATION

